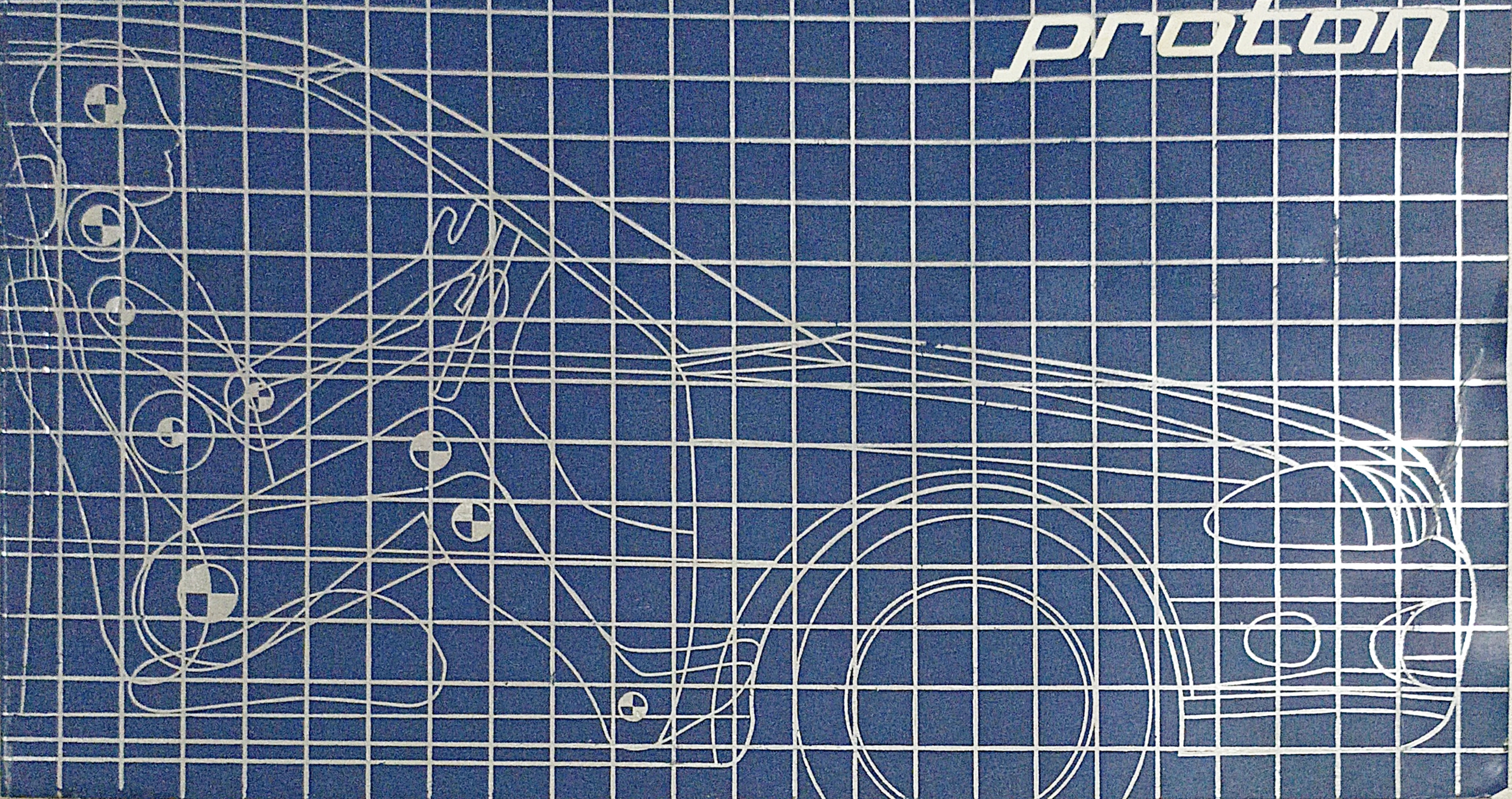
OWNER'S MANUAL

proton



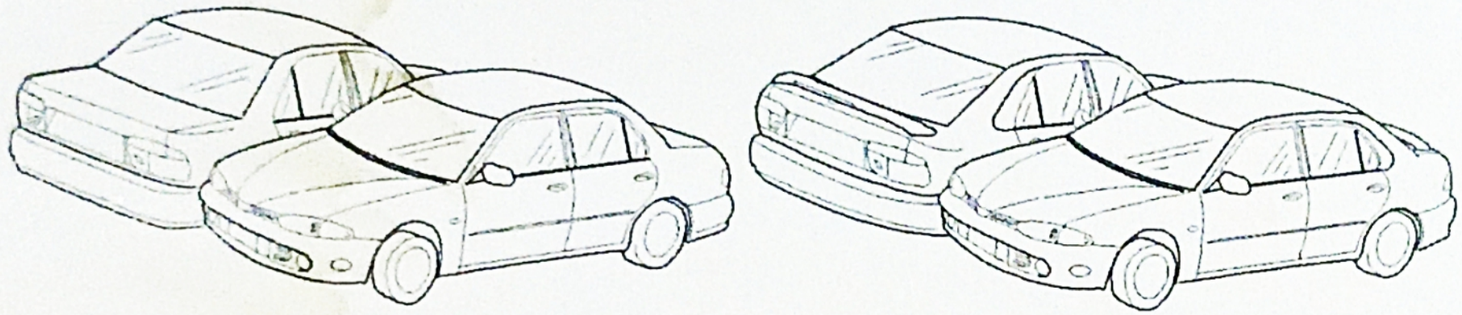
Foreword

0WN000FWORD001

Thank you for selecting Proton product as your vehicle. This owner's handbook will add to your understanding and full enjoyment of the many fine features of this vehicle. It contains information prepared to acquaint you with the proper way to operate and maintain your vehicle for the utmost in driving pleasure.

Perusahaan Otomobil Nasional Berhad reserves the right to make changes in design and specifications and/or to make additions to or improvements in this product without obligation to install them on products previously manufactured. It is an absolute requirement for the driver to strictly observe all laws and regulations concerning vehicles.

This manual has been written in compliance with such laws and regulations, but some of the contents may become contradictory with later amendment of the laws and regulations. If your vehicle is equipped with any new locally produced part, the operating procedure, specifications, maintenance intervals and other contents found this manual may not sometimes apply to it.



Perusahaan Otomobil Nasional Berhad

2001

Table of contents

GENERAL INFORMATION

LOCKING AND UNLOCKING

SEAT AND SEATBELTS

INSTRUMENTS AND CONTROLS

STARTING AND DRIVING

FOR PLEASANT DRIVING

VEHICLE CARE

FOR EMERGENCIES

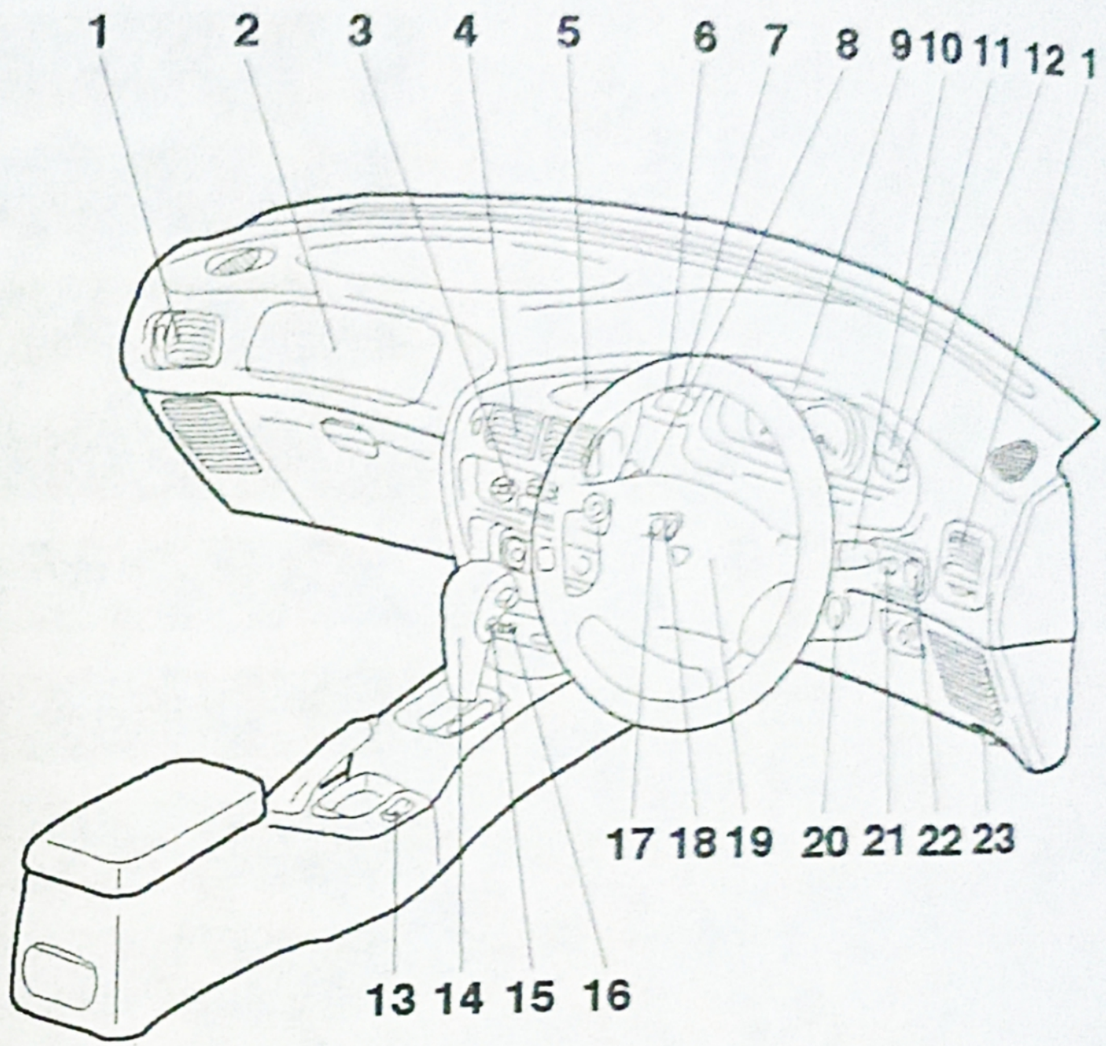
MAINTENANCE

SPECIFICATIONS

Instruments and controls

OWN001OVIEW001EMS

1 - Side ventilator
2 - Supplemental restraints system (for front passenger's seat)*
3 - Heater/Air conditioner*
4 - Center ventilator
5 - Digital clock
6 - Rear fog lamp switch/Fan switch*
7 - Hazard warning flasher switch
8 - Windscreen wiper and washer switch
9 - Meter and gauges
10 - Combination switch (headlights, turn-signal, etc.)
11 - Rear window demister switch
12 - Front fog lamp switch*
13 - POWER/ECONOMY mode change-over switch (4A/T only)*
14 - Gearshift or selector lever
15 - Overdrive control switch (4 A/T only)
16 - Cigarette lighter
17 - Rear window wiper and washer switch (Aeroback only)
18 - Headlamp levelling switch*
19 - Supplemental restraint system (for driver's seat)*
20 - Ignition switch
21 - Rheostat
22 - Electric remote-controlled outside rearview mirror*
23 - Bonnet release lever



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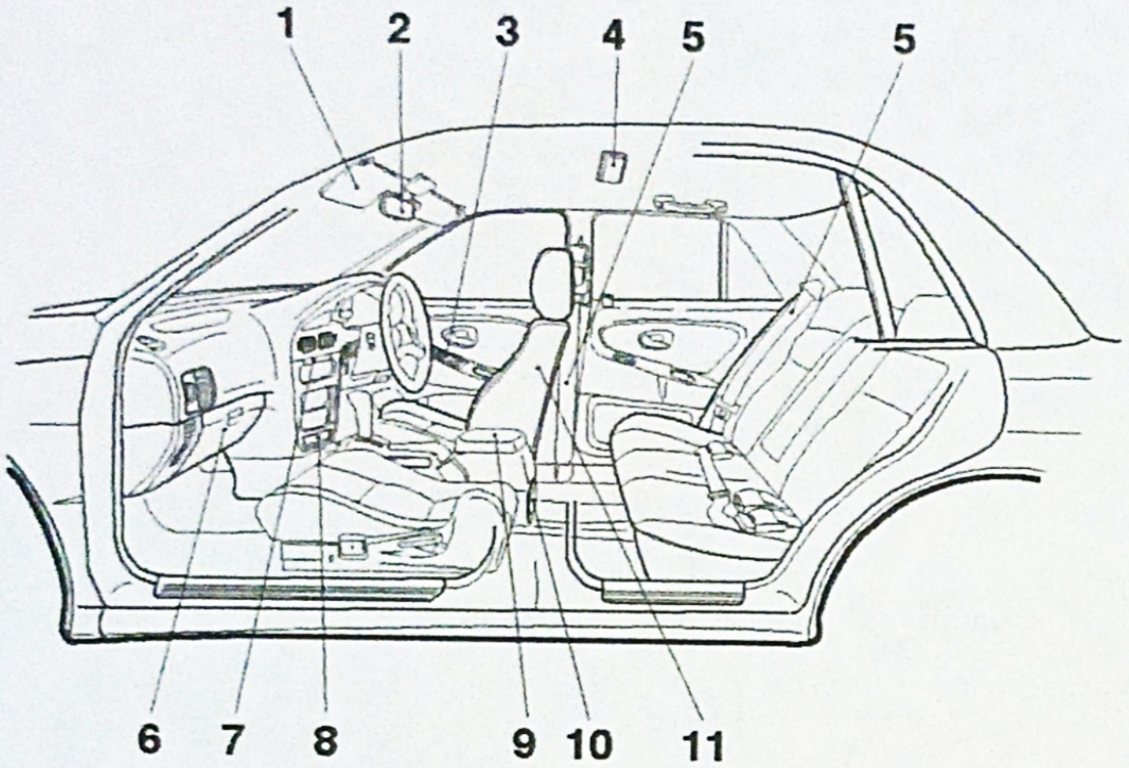


DOIAW000R3004

Interior

OWN001OVIEW003MC

1 - Sun visor
2 - Rear view mirror
3 - Electric window switch
4 - Room lamp
5 - Seatbelts
6 - Glove box
7 - Cup tray *
8 - Front ashtray
9 - Centre console box *
10 - Rear ashtray
11 - Seat

Indication of applicability
Additional equipment marked with * may refer according to the country it is sold or the sales classification; refer to the sales catalogue

GENERAL INFORMATION

Installation of accessories	8
Modifications/alterations to the electrical or fuel systems	8
Genuine parts	8
Safety instructions for used engine oils	8

Installation of accessories

OWN002GINFO002

Before fitting any accessories, please consult your authorised Proton dealer.

1. The installation of accessories, optional parts, etc. should only be carried out within the limits prescribed by law in your country, and in accordance with the guidelines and warnings contained within the documents accompanying this vehicle. Only Proton approved accessories should be fitted to your vehicle.
2. When installing any electrical device e.g. vehicle immobilizer/ alarm radio transceiver etc., ensure this does not interfere with any other electrical system, particularly the engine management computer, otherwise malfunctions may occur.
3. Tyres and wheels which do not meet specifications must not be used. Refer to the "Specifications" section for information regarding Wheel and Tyre sizes.

Modifications/alterations to the electrical or fuel systems

OWN002GINFO003

Proton has always offered safe, high quality vehicles. In order to maintain this safety and quality, it is important that any accessory that may be fitted, or modifications that may be carried out does not involve making any changes whatsoever to the electrical or fuel systems. Please consult an authorised Proton dealer concerning any accessory fitment or modifications, as improper installation could cause a fire.

Genuine parts

OWN002GINFO004

Do not use substitutes. Proton has gone to great lengths to bring you a superbly crafted vehicle offering the highest quality and dependability by using genuine parts. Always use Proton Genuine Parts designed and manufactured to maintain your Proton vehicle at top performance. Failure to use Genuine Parts, may invalidate any future warranty claim. Proton will not be liable for any malfunction of your vehicle that may have been caused by the use of substitute parts in place of Proton Genuine Parts. Proton Genuine Parts are available at all authorised Proton dealers.

Safety instructions for used engine oils

OWN002GINFO005

⚠ WARNING

(1) Prolonged and repeated contact may cause serious skin disorders, including dermatitis and cancer.

(2) Avoid contact with the skin as far as possible and wash thoroughly after any contact.

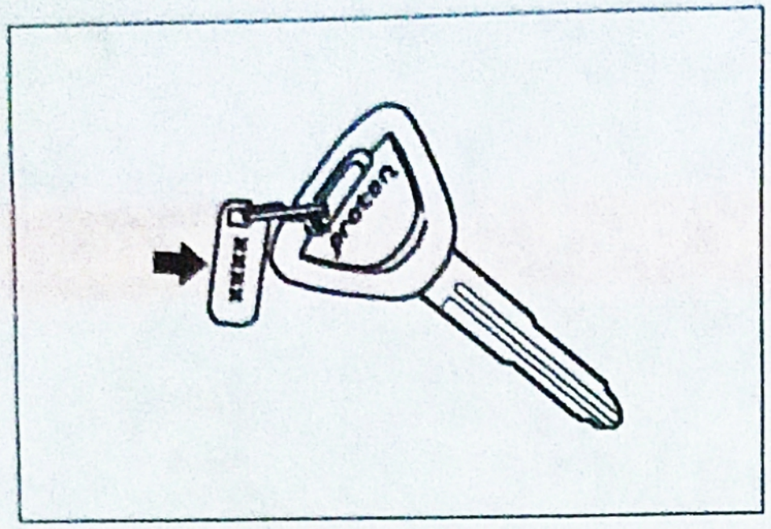
(3) Keep out of reach of children

SAFETY GLASS

This vehicle is fitted with laminated windscreen glass which meets general requirements and applications of safety glass standards for motor vehicles.

LOCKING AND UNLOCKING

Keys	10
Alarm system	10
Doors	13
"Child-protection" rear doors	14
Central door locks	14
Bonnet	15
Boot lid/Tailgate	16
Boot lid lock (Saloon)	17
Manual window control	17
Electric window control	18



DOIAW001R3001

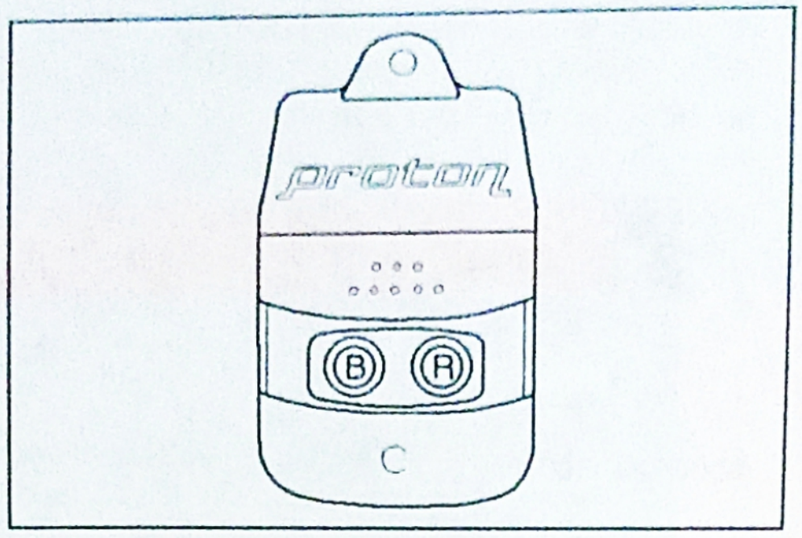
Keys OWN003LOCKS001MC

Two keys are provided. The keys fit all locks. Keep one in a safe place as a spare key.

NOTE

The key number is stamped on the key plate as shown in the illustration.

Make a record of the key number so that you can order a key from your authorised Proton dealer in the event the original keys being lost.



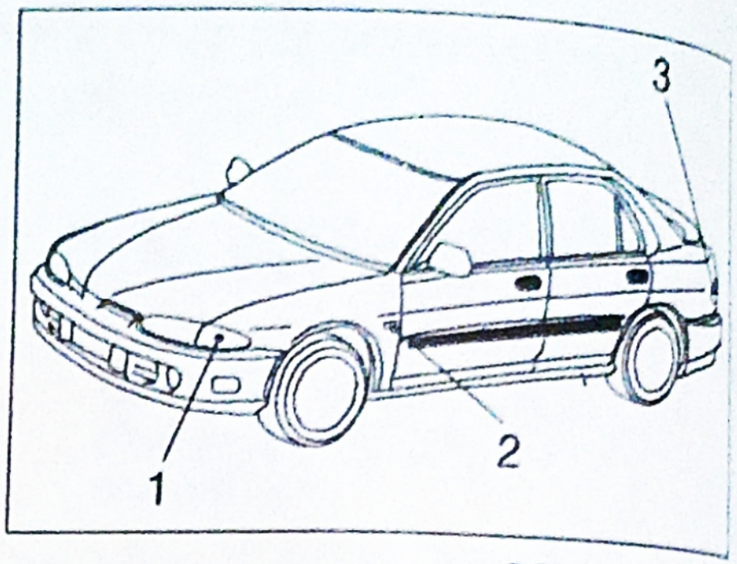
DOIAW003R7030

Alarm system OWN003LOCKS030

Proton alarm system is controlled by a highly portable and durable 2 button transmitter. The tranmitter will transmit a security coded radio signal to activate the car alarm, central lock system and panic siren. This system also helps to locate your vehicle in a large car park and detect the car door(s) at "LOCK" or "UNLOCK" position within a distance of 5 meters (provided no obstruction, interference and battery in the transmitter is in normal working condition). Correct function of the mode selected is indicated by the sound of the siren and lights of the vehicle.

B — BLUE button

R — RED button



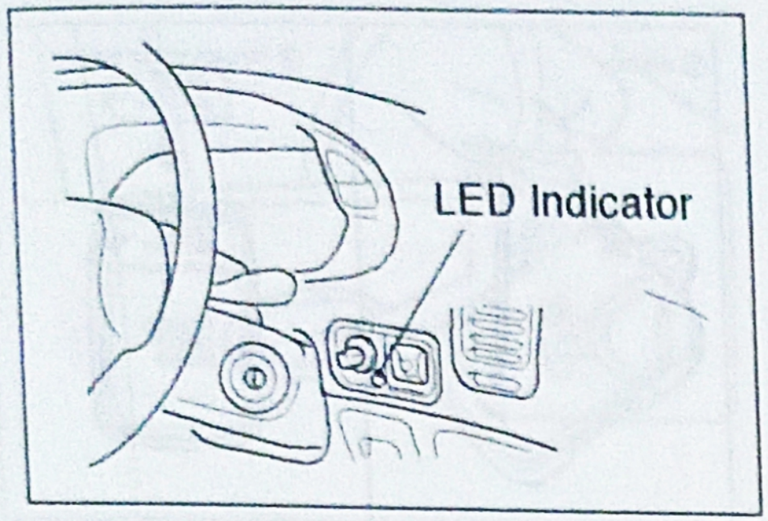
DOIAW003R7020

Car alarm / Central lock

To activate the alarm and central locking system, all door, rear boot (trunk lid) and front bonnet must be closed.

Operation procedures

1. Press the BLUE button of the transmitter once.
2. The alarm system is "ON" and all doors are "LOCKED".
3. All turn signal lamp will flash and siren sound once. (Single node sound)
   1. Front turn signal
   2. Side turn signal
   3. Rear turn signal

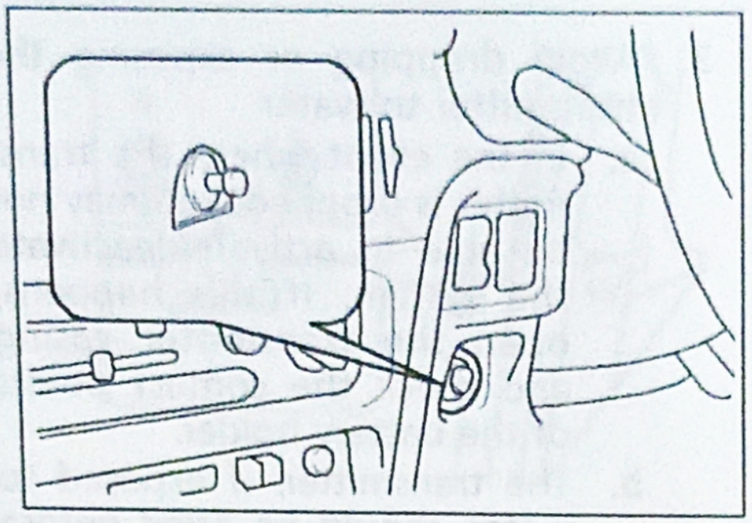


DOIAW003R7036

4. Should any of the doors, rear boot (trunk lid) or front bonnet is opened by an ignition key or other ways, the siren will activate and all turn signal lamps will flash immediately.
5. To deactivate the system, press the BLUE botton again (once). The alarm system is "OFF" and all doors are "UNLOCK". All turn signal lamps will flash and siren sound twice. (Double node sound)

NOTE

When the alarm system is "ON", the LED indicator will flash.



DOIAW003R7031

Manual Overriding system

PROTON auto alarm has a manual overriding system to deactivate the alarm with out using a transmitter in case the transmitter unit is misplaced/ lost or damaged.

Operation procedures

1. Unlock/open the car doors with the ignition key.
2. Siren will sound and lights shown in the illustralation will flash immediately.
3. Insert the ignition key and turn to the "ON" position of the ignition switch.
4. Press the reset switch shown in the illustration once and the alarm system will be deactivated.

Panic siren

PROTON alarm system offers you additional security by incorporating a panic siren system. This panic siren can be activated within a distance of 5 meters (provided no obstruction, interference and battery of the transmitter is in normal working condition) to frighten off thieves, robbers or trouble makers near your vehicle.

Operation procedures

1. Press the RED button of the transmitter once.
2. Siren will activate immediately with all the turn signal lamp flashing (refer illustration).
3. Alarm system is still "ON" and all doors are "LOCKED".
4. To deactivate, press the RED button again (once).
5. If the panic siren is not deactivated as in step 4, the siren will continue to sound approximately one minute and then will be automatically cut-off.
6. In the condition where aither the door(s), rear boot (trunk lid) or front bonnet is opened, the panic siren can only be deactivated by pressing the BLUE button after you have completed step 4 to switch off the alarm system.

Car Finder

This system can help you to locate your vehicle in a large car park. You may also use it to ensure that all doors are locked.

Operation procedures

1. Press the RED button of the transmitter once.
2. Siren will activate and all the turn signal lamps will flash (refer illustralation). All doors will be locked.
3. Press the RED button again (once) after locating your vehicle.

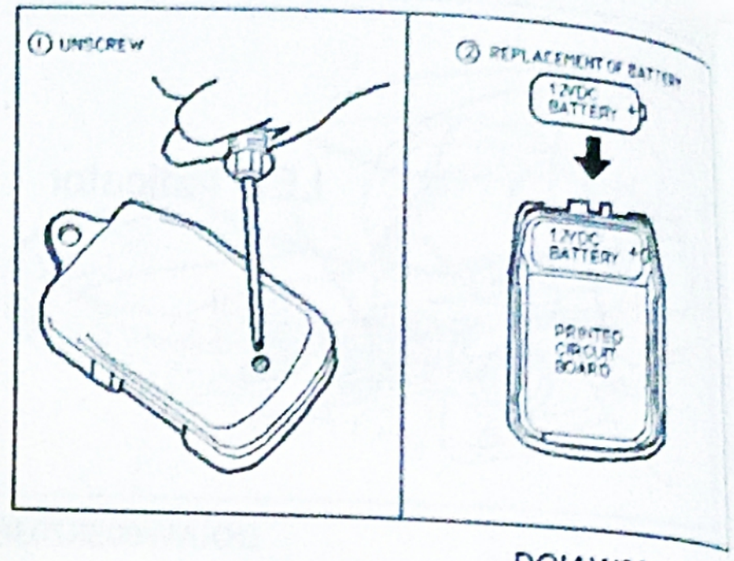
Important note

To ensure that this system is in good working conditions, always check the followings:-

1. Battery of the transmitter is weak, it will affect the system as follows:-
   a. The control distance of the transmitter is unable to activate or deactivate the alarm/ central lock system.
   b. The red indicator light of the tranmitter becomes dim or does not light while pressing the control buttons.

   NOTE: If the above symptoms are detected, the battery must be replaced.
2. Excessive RF interference/ HORMONIC interference

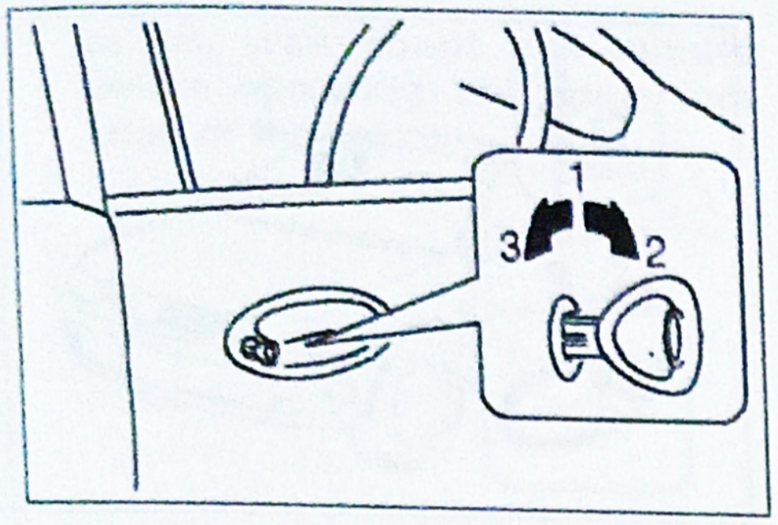
   Even if the battery of the transmitter is in goog working condition, the control distance may becomes nearer due to the excessive RF interference/ HARMONIC interference (e.g. mobile telephone is in used beside the vehicle; installation of audio devices like car speaker is too close to system control unit)
3. Avoid dropping or exposing the transmitter to water
   a. In the event where the transmitter is dropped, you may not be able to activate/deactivate the system. If this happens, open the transmitter casing and check the contact points of the battery holder.
   b. The transmitter, if exposed to water, should be dried before use.
   c. If the above cannot be rectified, consult our authorised Proton dealer.



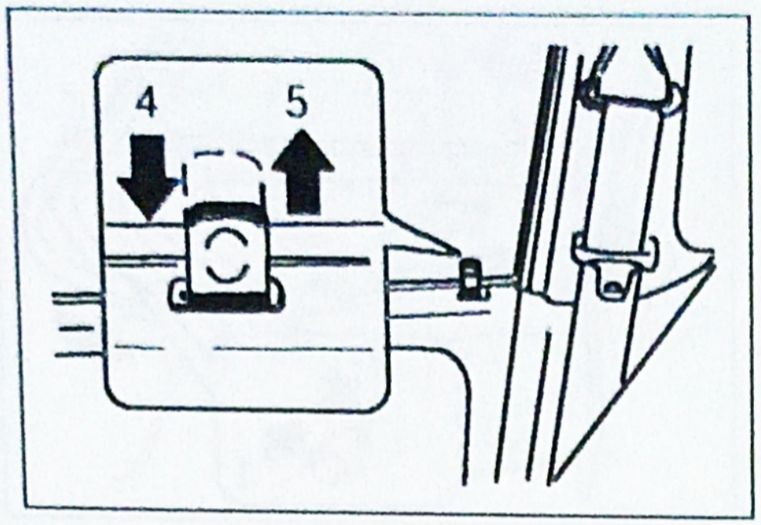
DOIAW005R8889

Replacement of the battery in the transmitter

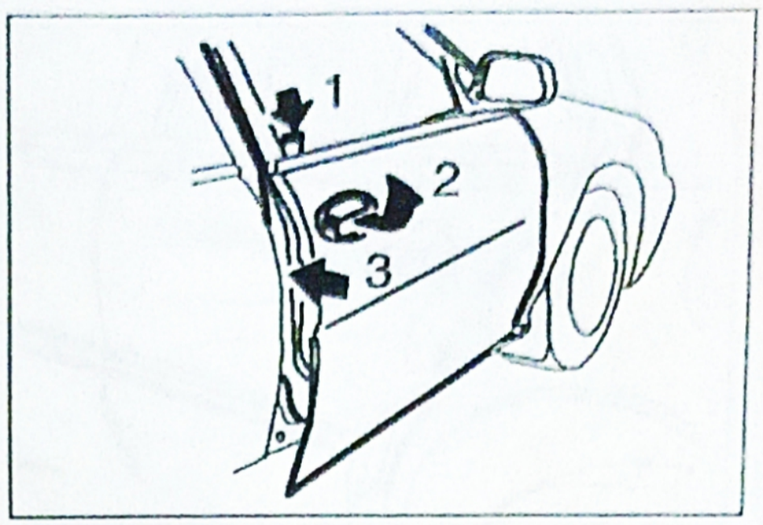
1. To change the battery, unscrew the transmitter as show in the illustration. Replace the battery in its correct polarity.
2. The battery can be purchased from all authorised Proton dealers.



DOIAW001R3002



DOIAW001R3003



DOIAW001R3004

Doors

OWN003LOCKS110

Operation from outside the vehicle

1. Insert or remove the key.
2. Lock
3. Unlock

Operation from inside the vehicle

4. Lock
5. Unlock

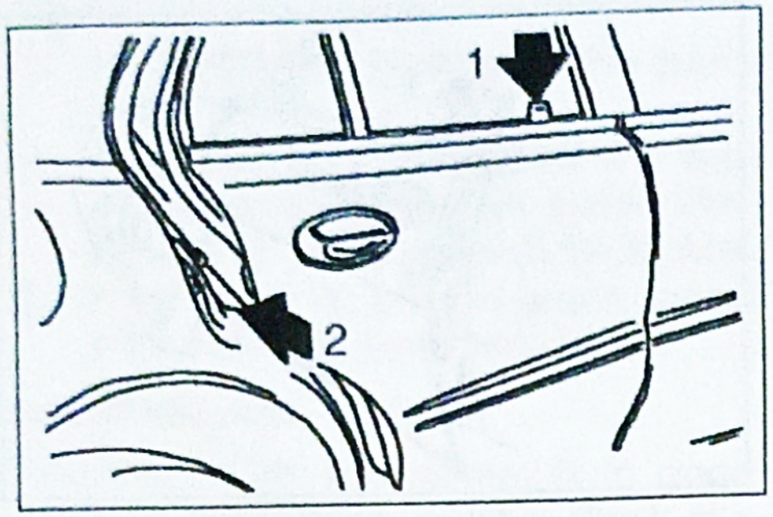
Pull the inside handle towards you to open the door.

To lock the front doors without a key (passenger side)

Set the inside lock knob (1) to the locked position and while pulling the outside handle up (2), close the door (3).

NOTE

The driver's door cannot be locked while the door is open. Use a key to lock the driver's door



DOIAW003R8884

To lock the rear doors

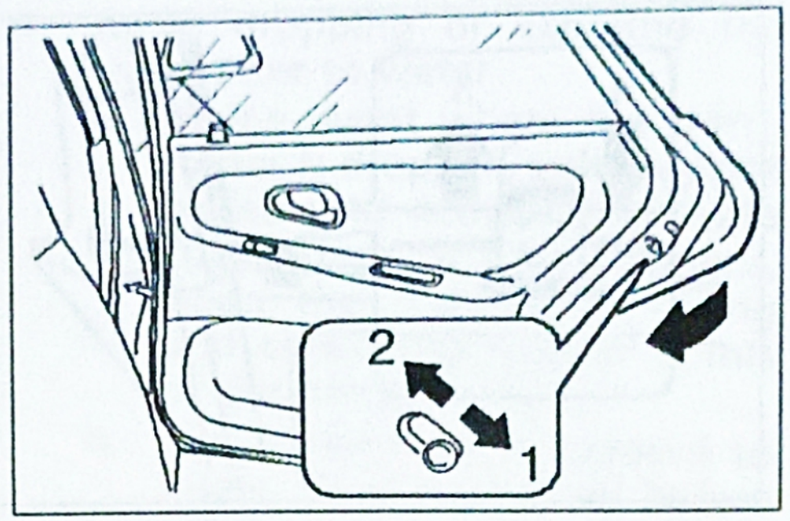
Set the inside lock knob (1) to the locks position, and close the door (2).

⚠ CAUTION

Make sure the doors are closed: driving with doors incompletely closed is very dangerous.

Never leave a child in the vehicle unattended.

Be careful not to lock the doors while the key is inside the vehicle.



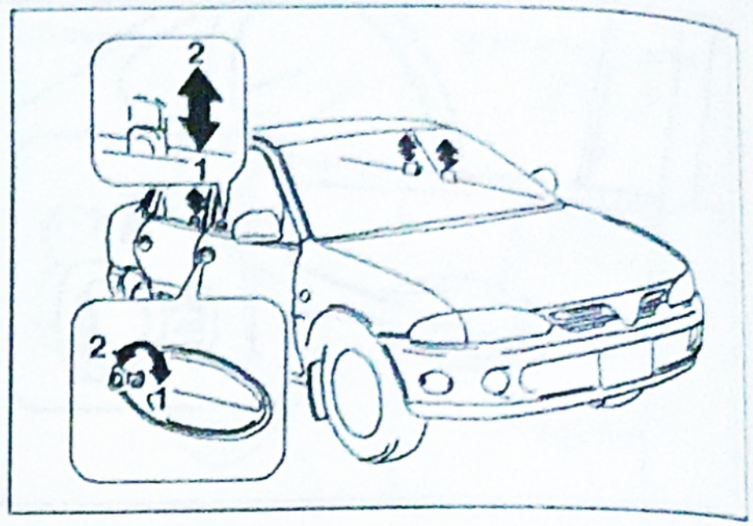
DOIAW001R3036

"Child-protection" rear doors

OWN003LOCKS005MC

1. Lock
2. Unlock

Child protection helps prevent doors from being opened accidentally, especially when small children are in the rear seat.The lever is provided on each rear door. If the lever is set to the locked position, the rear doors cannot be opened from inside the vehicle. To open the rear door while the child protection is in use, pull the outside door handle. If the lever is set to the "Free" position, the child protection mechanism does not work.



DOIAW001R3007

Central door locks *

OWN003LOCKS006MC

By locking or unlocking either the driver's door using the inside lock knob, or one of the front doors (driver and passenger side) using the key, all of the doors can be simultaneously locked or unlocked.

1. Lock
2. Unlock

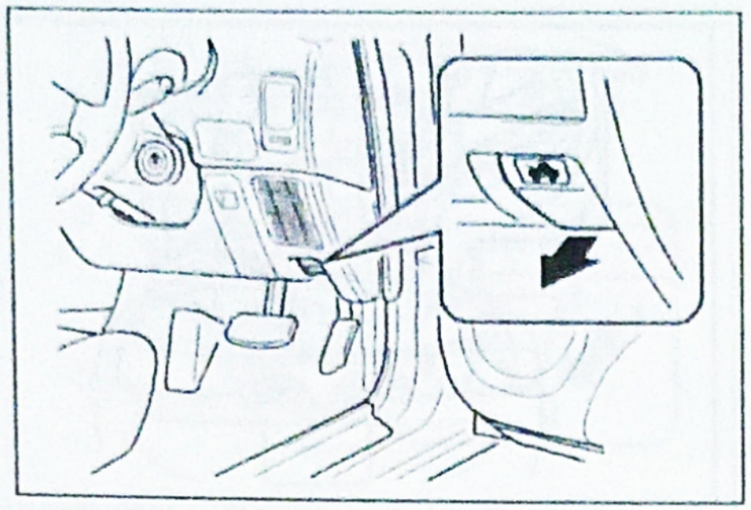
NOTE

(1) Each of the doors can be locked or unlocked independently by using the inside lock knob.

(2) Repeated continuous operating between lock and unlock could cause the central door locks' built-in protection circuit to prevent the system from operating. If this

* if fitted

occurs, wait about one minute before operating the inside lock knob or the key.



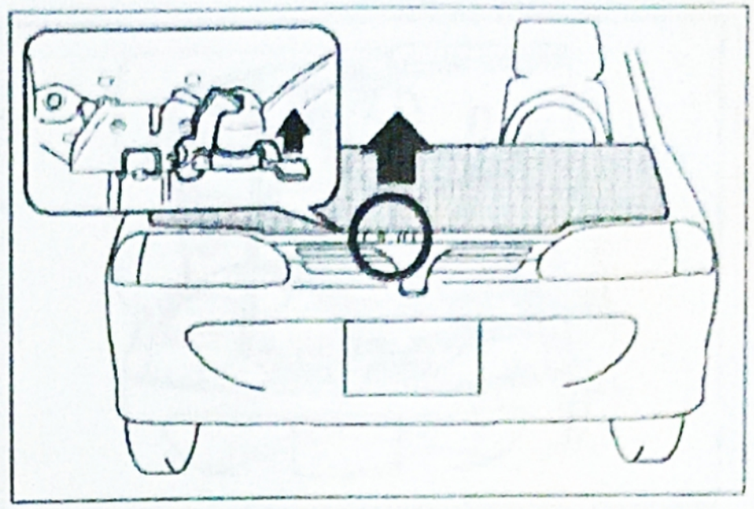
DOIAW001R3037

Bonnet

OWN003LOCKS007MC

To open

Pull the release lever toward you to unlock the bonnet.

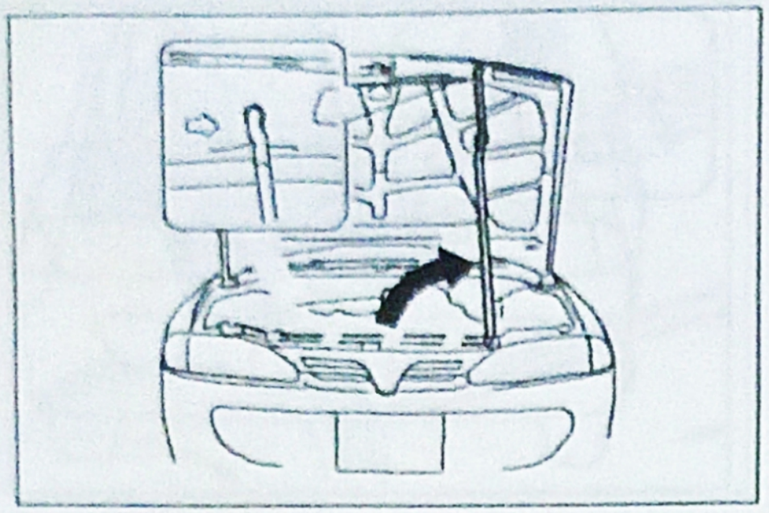


DOIAW001R3038

Raise the bonnet while pressing the safety lock.

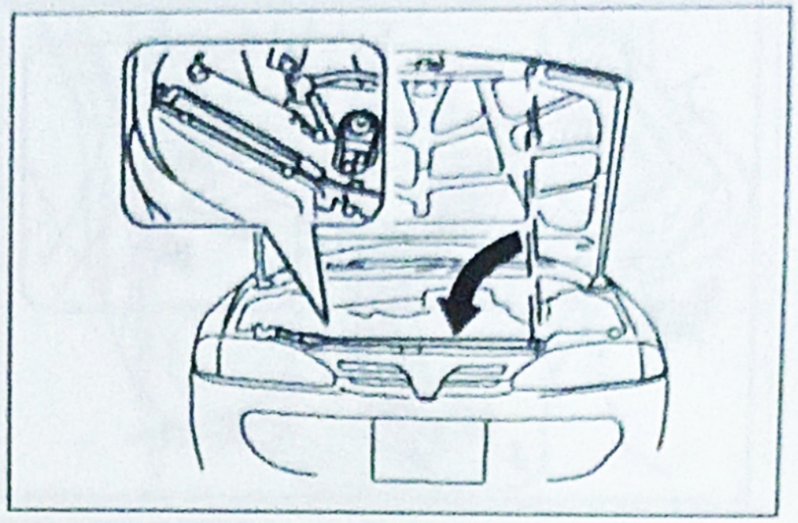
NOTE

Only open the bonnet when the wipers are in the park position.



DOIAW001R3039

Support the bonnet by inserting the support bar at its slot.



DOIAW001R3040

To close

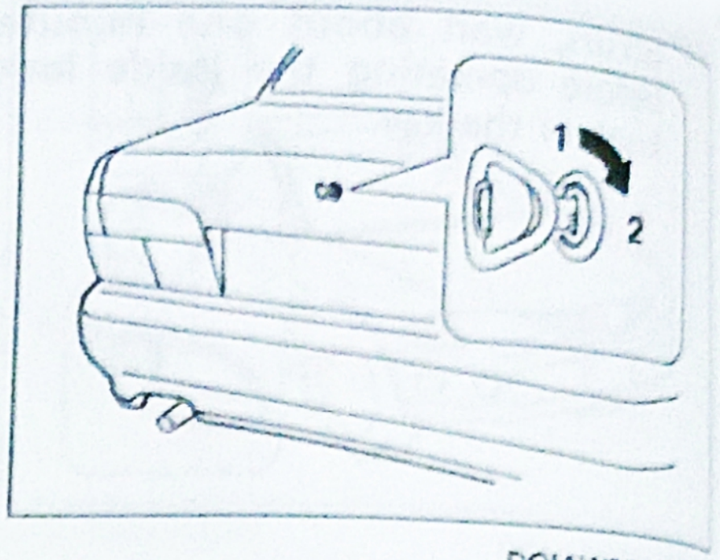
Unlatch the support bar. Slowly lower the bonnet to the position 30 cm above the closed position, then release it to drop from its own weight.

NOTE

(1) If this does not close the bonnet, push it slightly with your hand while it is going down.

⚠ CAUTION

Before driving, make sure that the bonnet is securely locked. An incompletely locked bonnet can suddenly open while driving. This can be very dangerous.



DOIAW001R3012

Boot lid/Tailgate

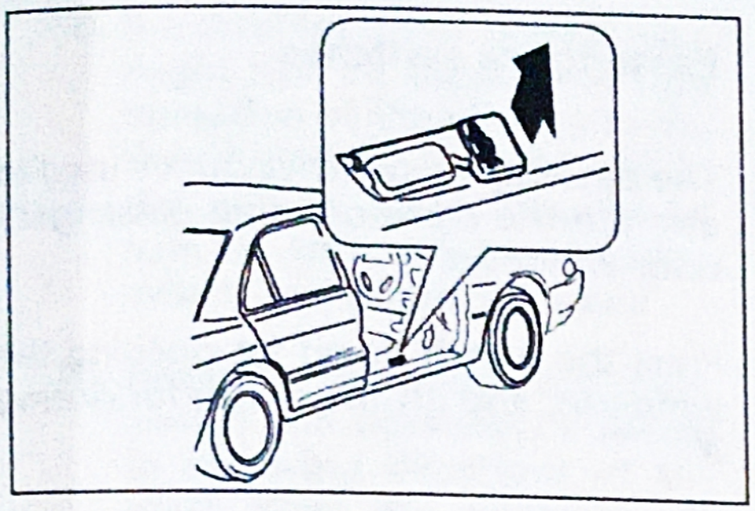
OWN003LOCK500RM

Operation from outside the vehicle

1 - Insert (or remove) the key
2 - Unlock

To open the boot lid/tailgate, turn the key

To close, press the boot lid/tailgate down until it is closed.



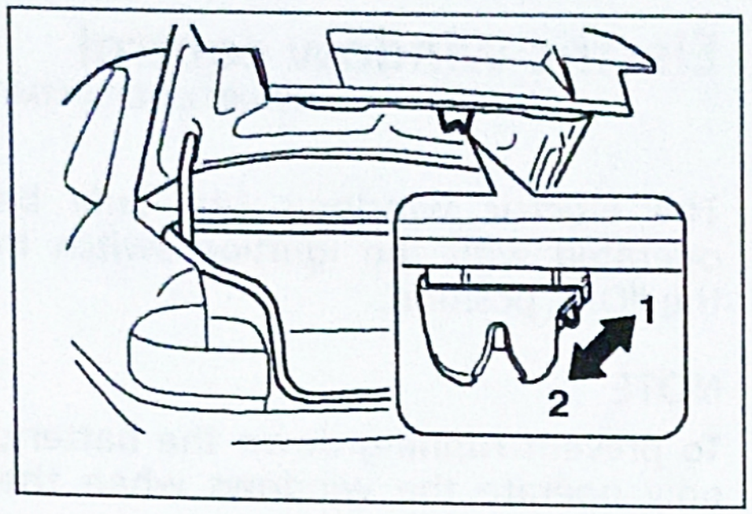
DOIAW001R3013

Operation from inside the vehicle

To open the boot lid, pull the release lever located beside the driver's seat. To close, press the boot lid down.

NOTE

The luggage compartment lamp illuminates when the lid is opened, and off when it is closed.



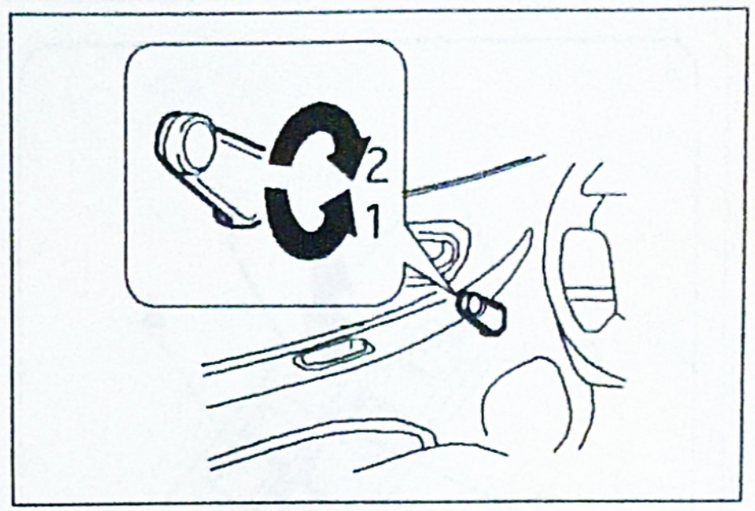
DOIAW001R3043

Boot lid lock (Saloon)

OWN003LOCKS009MC

1. Lock
2. Unlock

When the boot lid is closed with the boot lid lock in the locked position, it cannot be opened by using the boot lid release lever use the key to open the boot lid.

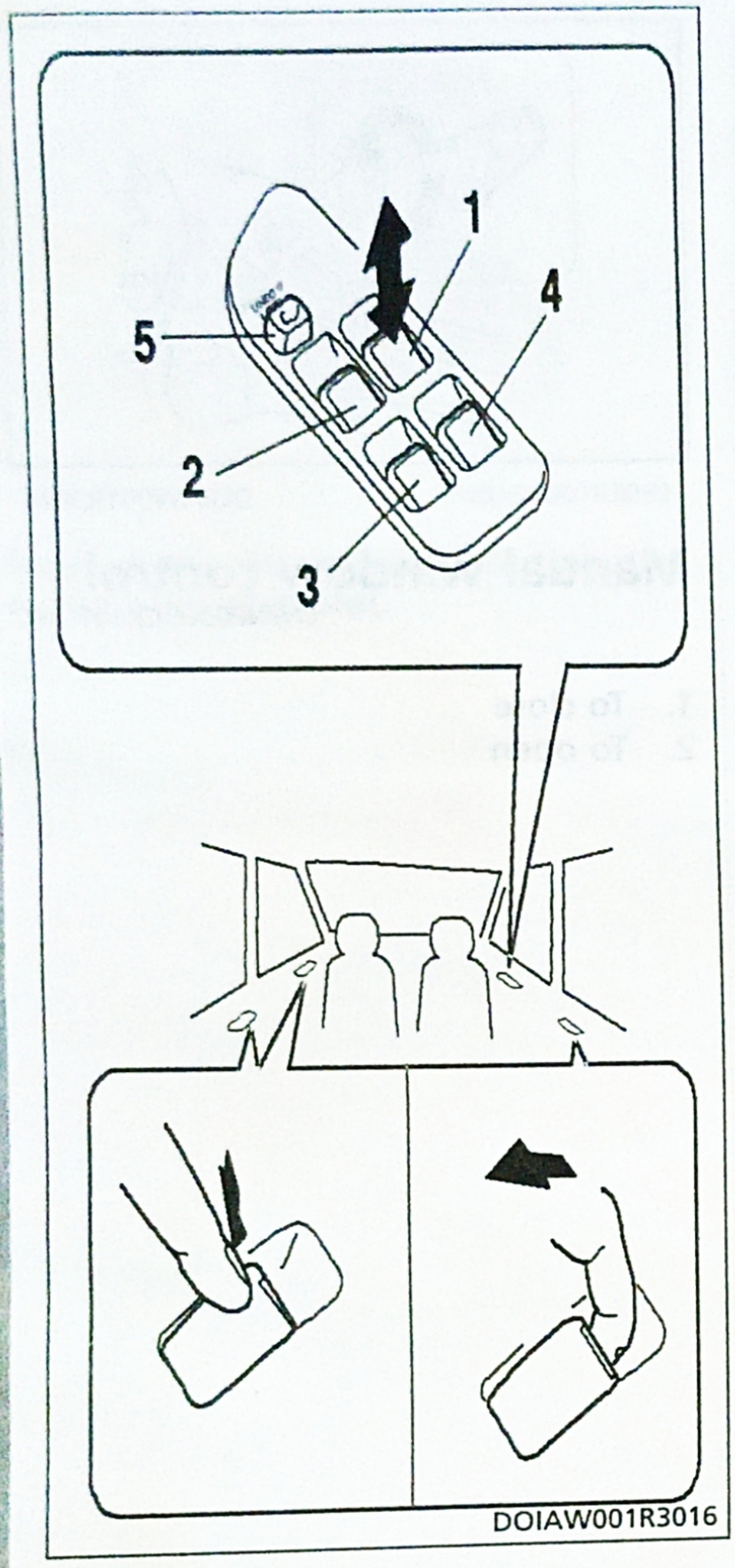


DOIAW001R3044

Manual window control

OWN003LOCKS010MC

1. To close
2. To open



Electric window control

OWN003LOCKS011MC

The electric windows can only be operated with the ignition switch in the "ON" position.

NOTE

To prevent running down the battery, only operate the windows when the engine is running.

Driver's switches

The driver's switches can be used to operate all door windows. A window can be opened or closed by operating the corresponding switch.

Press the switch down for opening the window, and lift the switch for closing.

1 - Driver's door window
The door window opens or closes while this switch is operated.
When opening the driver's door window if the switch is fully depressed, it is not necessary to hold it down for operation.

2 - Front passenger's door window

3 - Rear left door window

4 - Rear right door window

Passenger's switches

The passenger's switches can be used to operate the corresponding passenger's door windows.

Press the switch down for opening the windows, and lift the switch for closing it

NOTE

The rear door windows only open halfway, not completely.

Lock switch

5 - When this switch is operated, the passenger's switch cannot be used to open or close the door window. To unlock, press it once again.

⚠ CAUTION

(1) Be careful that either head or hands are not trapped by a closing window.

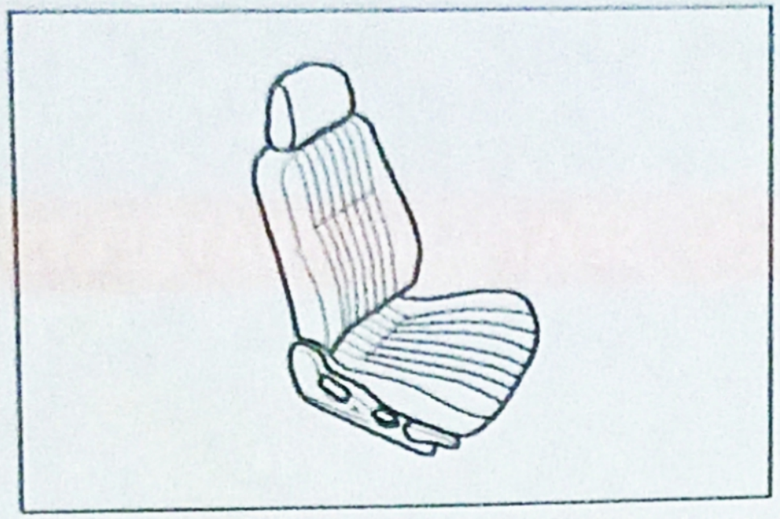
(2) A child may tamper with the switch at risk of its hands or head becoming trapped by the window. When driving with a child in the vehicle, be sure to press the window lock switch to make the passenger's switch inoperative.

(3) If a child (or other person who might not be capable of safe operation of the electrical window switches) is to be left in the vehicle alone, always be sure to turn off the ignition switch and remove the key.

(4) Never try to operate a driver's switch and passenger's switch in opposing directions at the same time; the window will stop.

SEAT AND SEATBELTS

Front seat adjustment	22
Rear seat	24
Headrestraints	25
Armrest*	26
Seat belts	27
Child restraint	29
Pregnant women restraint	30
Seat belt inspection	31
Rear seat belts tray	31
Supplemental restraint system (SRS)	32



DOIAWC02R3030

Front seat adjustment

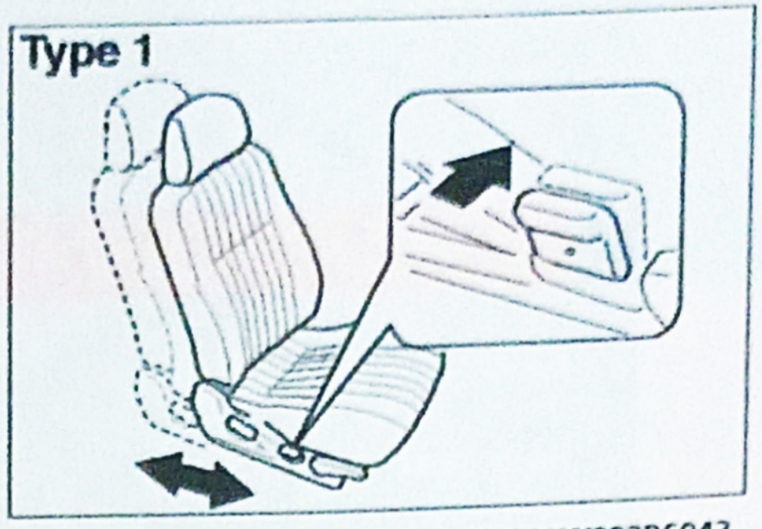
OWN004SEATS100MC

Adjust the driver's seat to the position that allows you to easily control the pedals, steering wheel and switches on the instrument panel, and provides a clear front view.

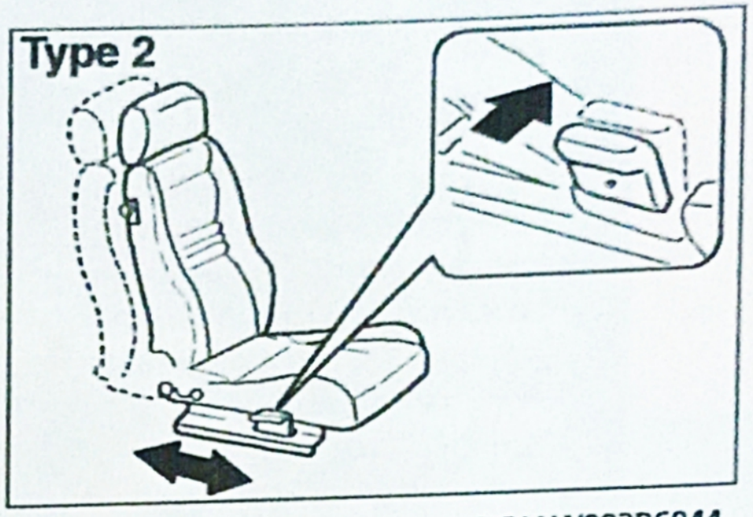
⚠ CAUTION

(1) Always adjust the seat before driving.

(2) After adjusting be sure that the seat is securely locked.



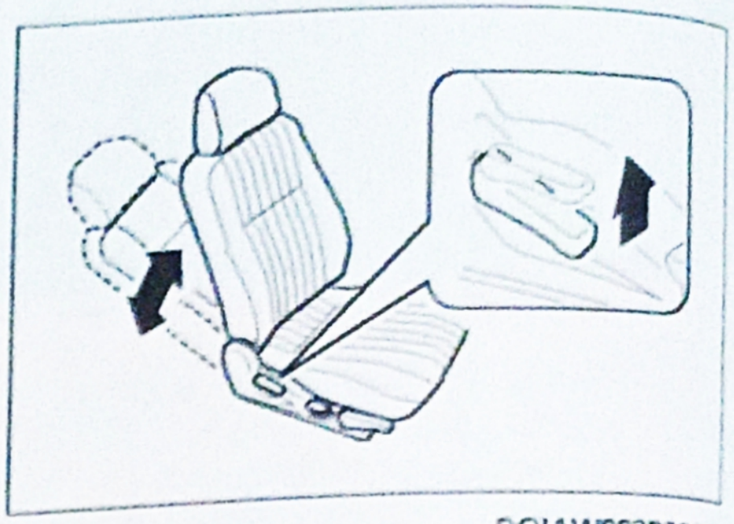
DOIAW003R6043



DOIAW003R6044

To adjust forward or backward

Pull the seat adjusting lever and adjust the seat forward or backward to the desired position. After adjustment, release the adjusting lever to lock the seat in position.

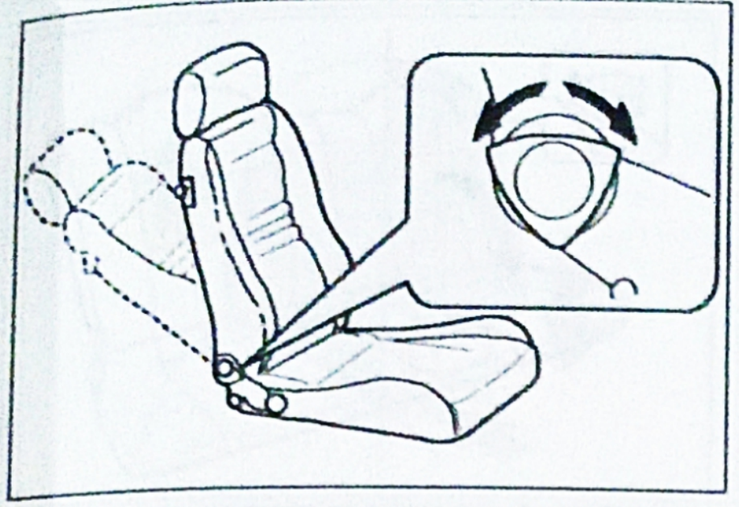


DOIAW002R3003

To recline the seatback

Type 1

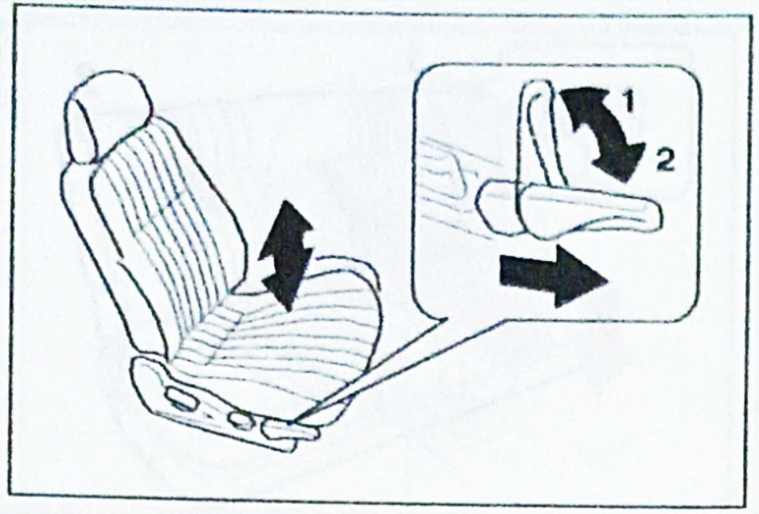
In order to recline the seatback, lean forward slightly, pull the seatback lock lever up, and then lean backward to the desired position and release the lever. The seatback will lock in that position.



DOIAW002R1118

Type 2

In order to recline the seatback to the desired position, turn the reclining knob clockwise (forward) or anticlockwise (backward). The degree of reclination depends on the number of turns.

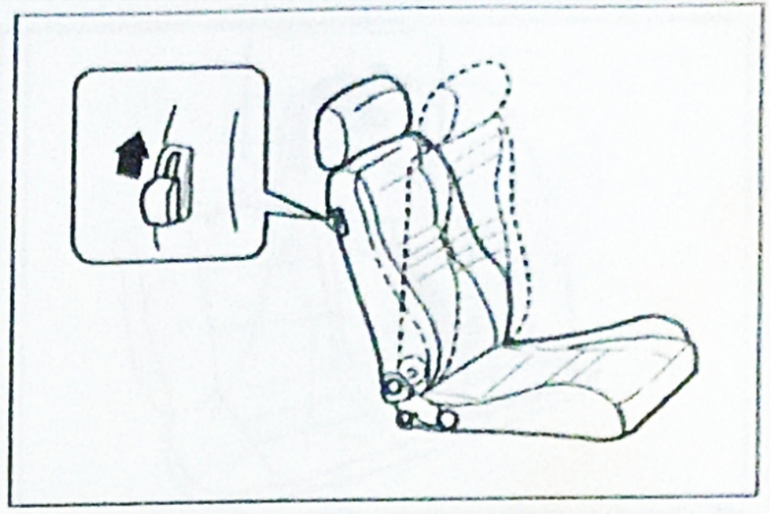


DOIAW002R3034

Adjustment of seat height (driver's seat only) *

Adjust the seat cushion height by pulling out the lever and moving it as indicated in the illustration.

1. Rais
2. Lower



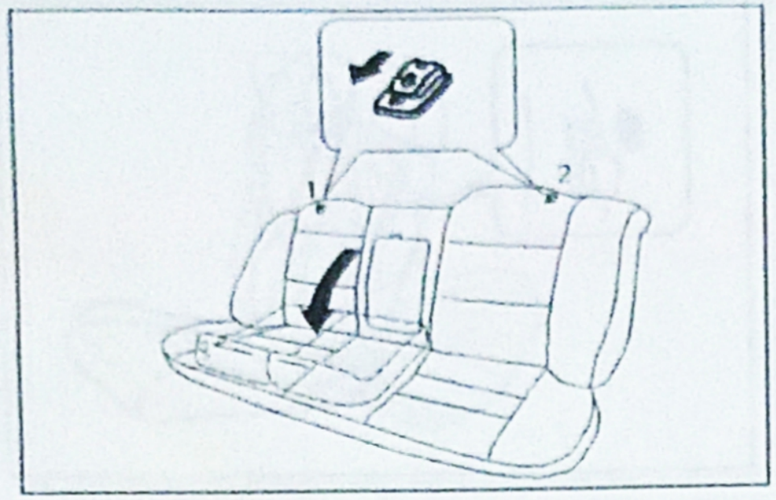
DOIAW002R1119

To get in and out of rear seat *

Type 2

The walk-in knob can be used to make getting in and out easier. When the knob is push upward the seatback is free to be tilt forward by pushing it forward. To return the seat to its original position, push it backward until a "click" is heard.

* if fitted



DOIAW002R3036

Rear seat OWN004SEATS002MC

Folding the seatback forward

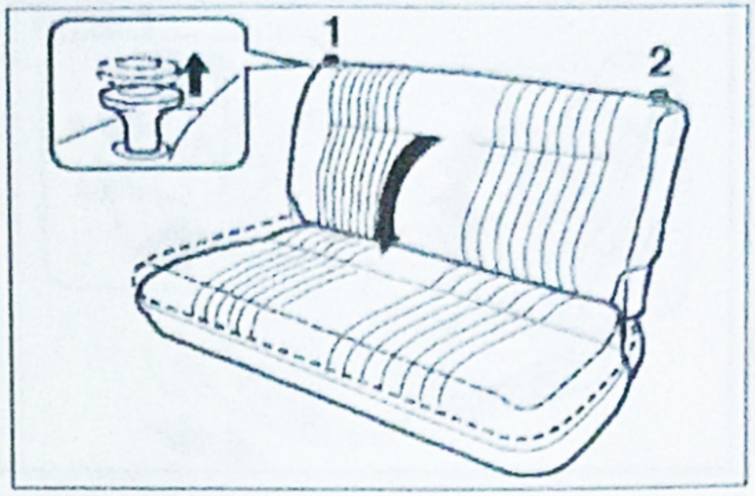
The right and left seatbacks can be folded forward separately.

1. The right seatback can be folded forward.
2. The left seatback can be folded forward.

Confirm that the seatback locks securely when it is returned.

NOTE

The passenger and luggage compartments can be joined by folding the rear seatback forward. This is useful for carrying long objects.

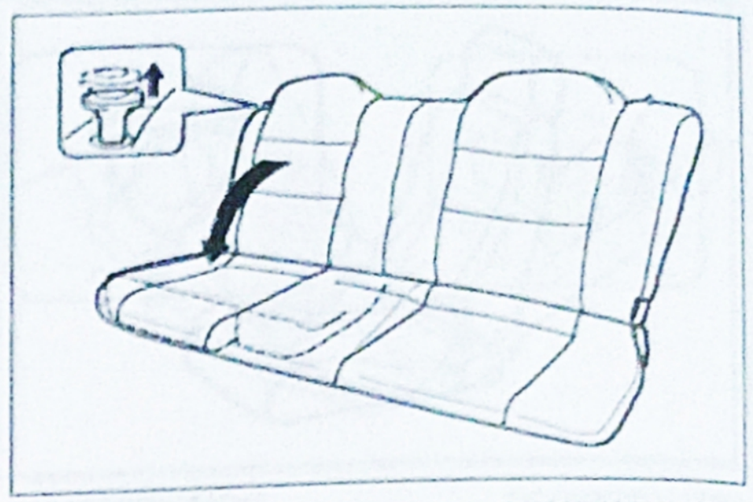


DOIAW002R1120

Folding the seatback forward (Aeroback) *

Type 1

The seatback can be folded forward.



DOIAW002R3038

Type2

The right and left seatbacks can be folded forward separtely.

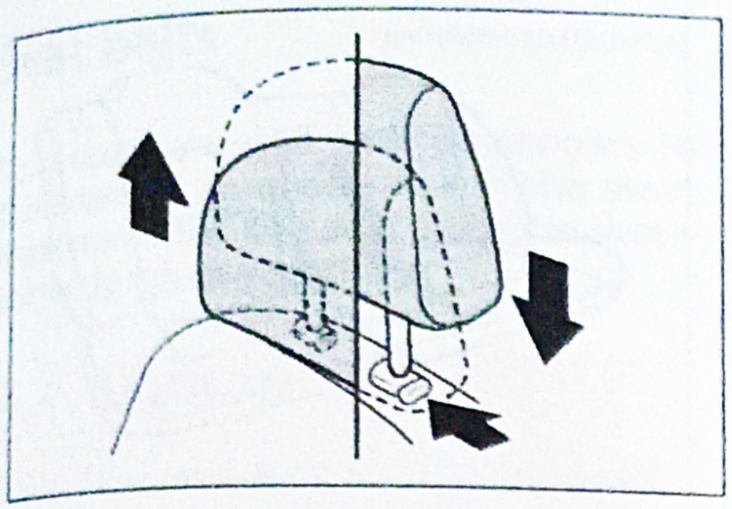
1. The right seatback can be folded forward.
2. The left seatback can be folded forward.

Confirm that the seatback locks securely when it is retured.

NOTE

The passenger and luggage compartments can be joined by folding the rear seatback forward. This is useful for carrying long objects.

* if fitted



DOIAW002R3039

Headrestraints *

OWN004SEATS003MC

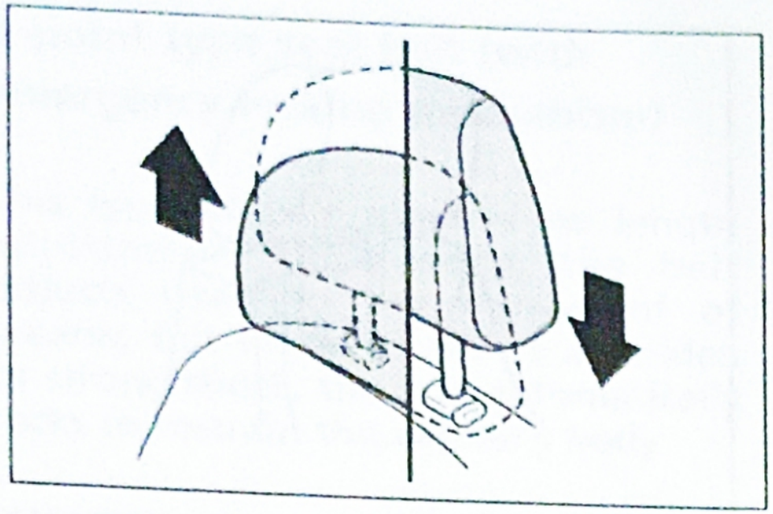
Adjustment of the height

Adjust the headrestraints height so that the centre of the restraint is as close as possible to eye level to reduce the chance of injury in the event of collision.

Type 1

To raise the headrestraint, move it upward.

To lower the restraint, move it downward while pushing the height adjusting knob in the direction of the arrow.



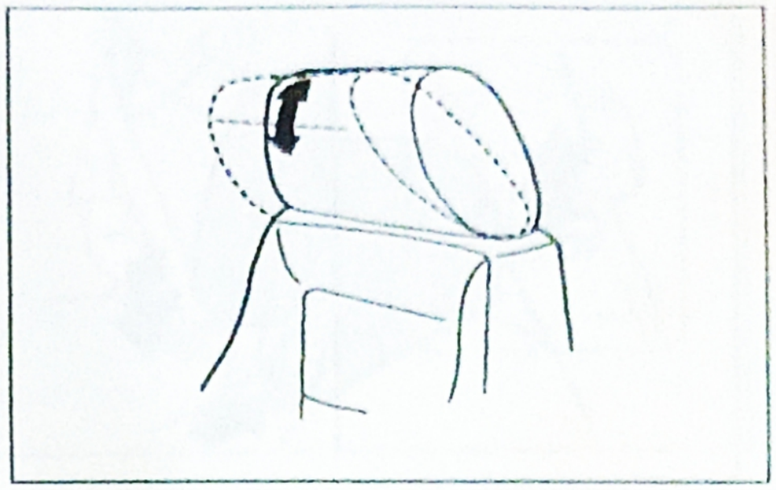
DOIAW002R1121

Type 2

To raise the headrestraint, move it upward.

To lower the restraint, move it downward.

After the adjustment, make sure that the headrestraint is locked.



DOIAW002R1122

To recline the headrestraint *

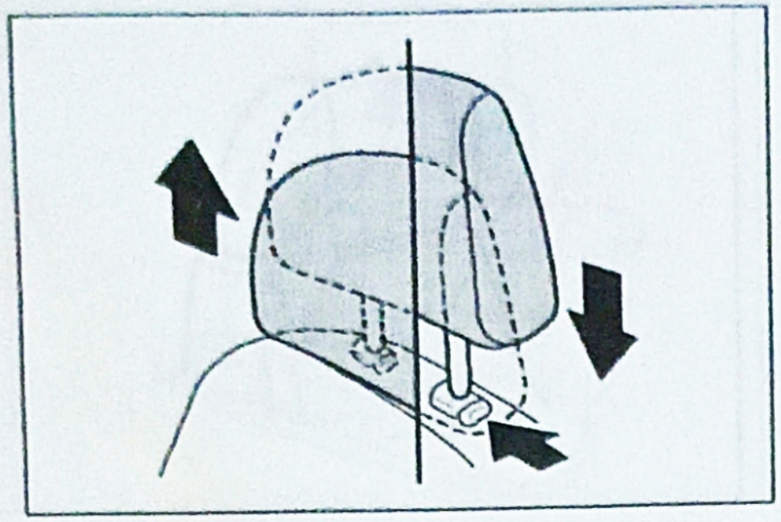
The headrestraint can be recline either forward or backward by moving it in the direction of arrow.

⚠ CAUTION

(1) The headrestraints can only protect you if they are correctly adjusted.

(2) If a cushion or the like is placed between your back and the seat-back, the headrestraint will barely protect you in the event of an accident.

* if fitted



DOIAW002R3008

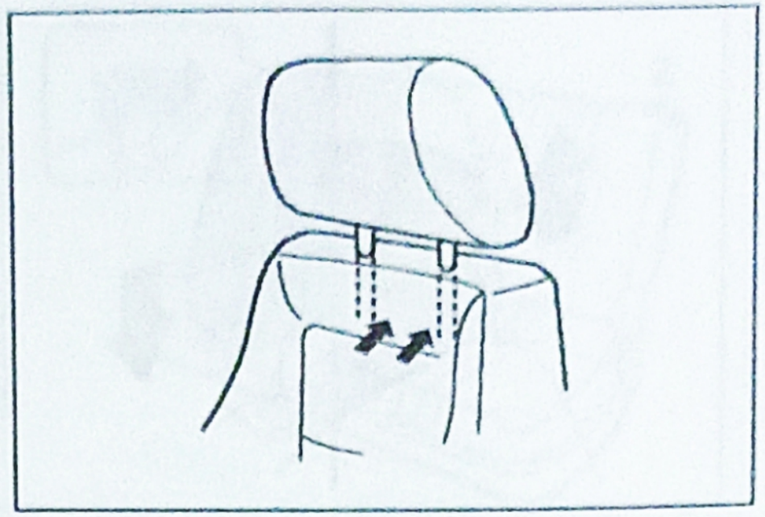
Removal of headrestraints

Type 1

To remove the headrestraints, fully pull up the headrestraints with the heights adjusting knob pushed in.

To remount the headrestraints, first confirm that they are facing the correct direction, and then insert them into the seatback while pressing the height-adjusting knobs in the direction indicated by the arrows.

Confirm that the height-adjusting knobs are correct as shown in the illustration, and also pull up on the headrestraints to confirm that they do not come out of the seatback.



DOIAW002R1123

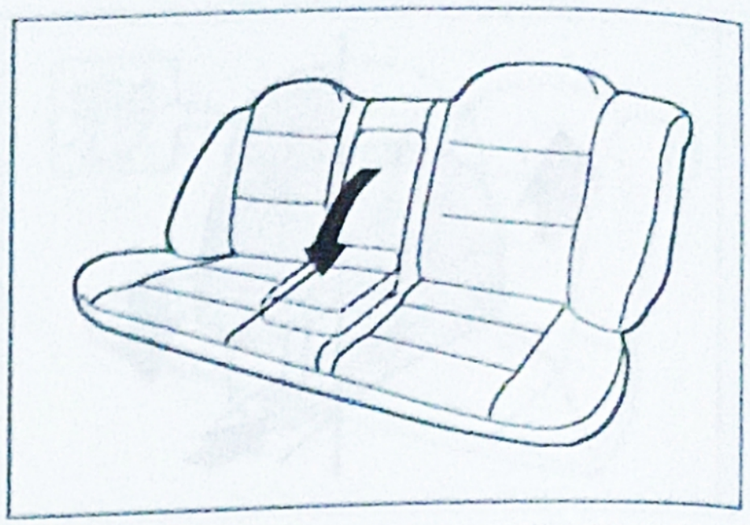
Type 2

To remove the headrestraints, press the upper part of the seat cover suface according to the direction indicated and pull the headrestraint up.

During remounting, be sure that the headrestraint is locked.

⚠ CAUTION

It is dangerous to drive without or badly adjusted headrestraints; always have them correctly mounted when using the vehicle.



DOIAW002R3043

Armrest*

OWN004SEATS300MC

Tilt the armrest for use as illustrated.

Seat belts

OWN004SEATS004MC

To protect you and your passengers in the event of an accident, it is the most important that the seat belts be worn correctly when you drive.

⚠ CAUTION

(1) One seat belt should be used by only one person. Doing otherwise can be dangerous.

(2) Never wear the lap belt across your abdomen. During accidents it can press sharply against abdomen and increase the risk of injury.

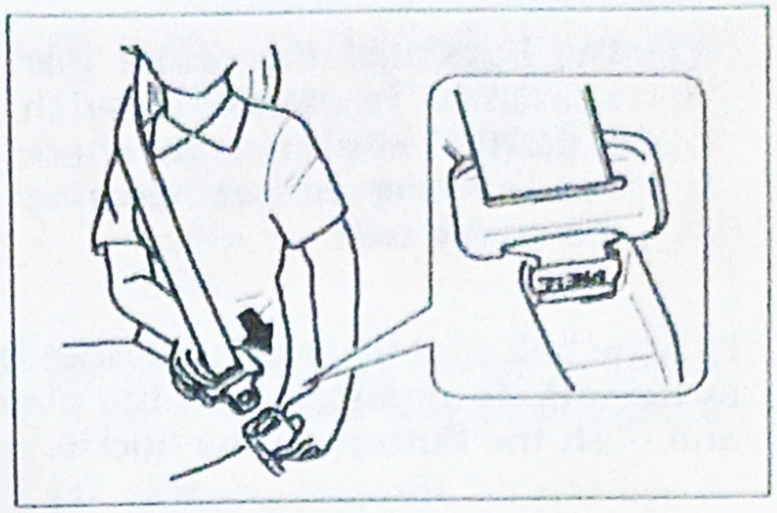
(3) Never wear the shoulder portion of the seat belt under the arm or other out of position.

(4) Remove any twists when using the belt.

(5) The seat belt will provide maximum protection for its wearer if the recliner seatback is placed in fully upright position. When the seat back is reclined, there is greater risk that the passenger will slide under the belt, especially in a forward impact accident, and may be injured by the belt or by striking the instrument panel or seatbacks.

3–point type seat belt (with emergency locking mechanism)

This type of belt requires no length adjustment. Once worn, the belt adjusts itself to the movement of wearer, but in the event of a sudden or strong shock, the belt automatically locks to restrain the wearer's body.



DOIAW002R3010

To fasten

Pull the seat belts out slowly while holding the plate.

Hold the latch plate by hand, insert the latch plate into the buckle until a "click, is heard.

NOTE

When the seat belts can not be pulled out in a locked condition, pull the belts once with slight force and then return them. After that, pull the belts out slowly once again. Insert the plate into the buckle until it clicks.

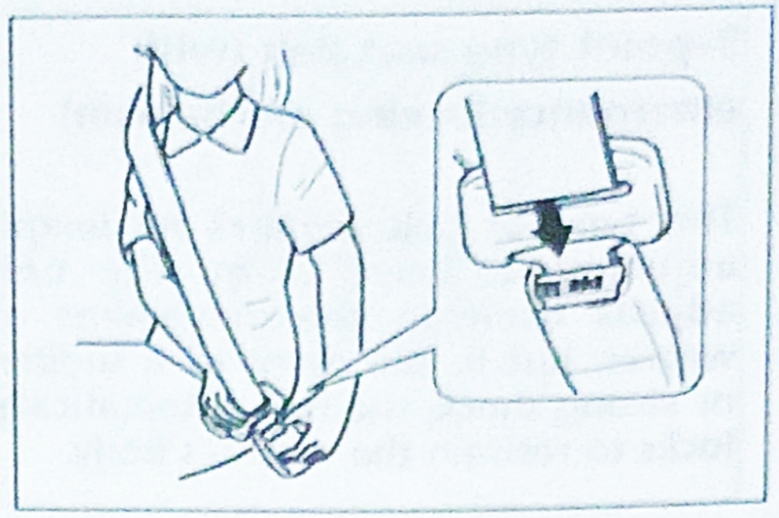
⚠ CAUTION

(1) Always position the lap portion of belt as low on the hip bones as possible.

(2) The seat belts must not be twisted when worn.

(3) The buckle of the centre rear seatbelt is marked with "CENTRE". Be sure to check the marking before wearing the centre belt.

Pull the belt slightly to adjust slackness as desired. To unfasten hold the plate and push the button on the buckle.



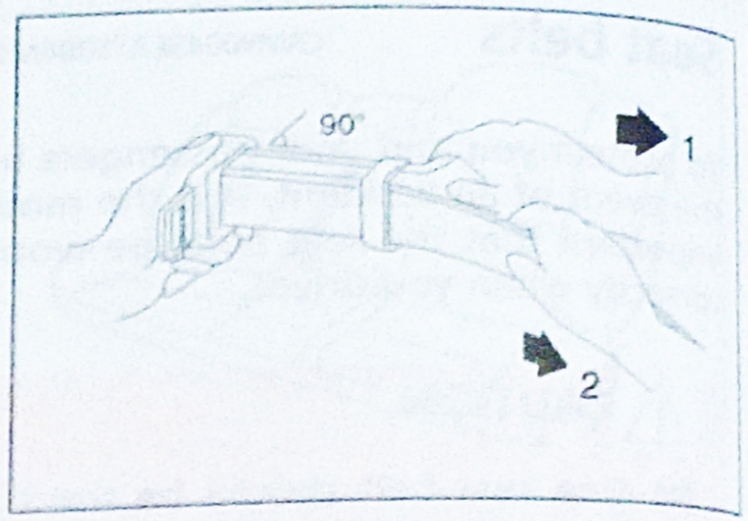
DOIAW002R3011

To unfasten

Hold the plate and push the button on the buckle.

NOTE

As the belt retracts automatically, keep the plate held while retracting so that belt stows slowly.



DOIAW002R3046

Lap belts

The lap belts should be adjusted by holding the belt and latch plate at right angles to each other, and then pulling the belts as shown in the illustration to snug fit around the occupant.

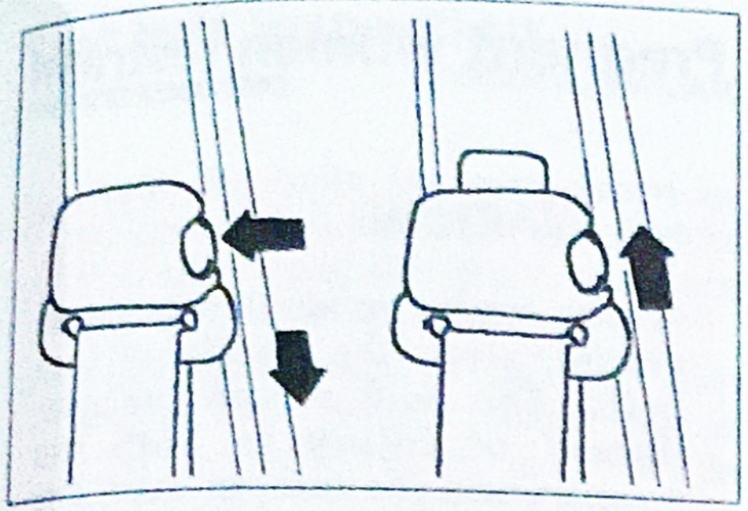
1 - Tighten
2 - Loosen

Holding the latch plate by hand, insert the latch plate into the buckle until a "click" is heard.

NOTE

The buckle and plate of the center lap belt are marked with "CENTER".

Be sure to check the marking before wearing the centre lap belt.



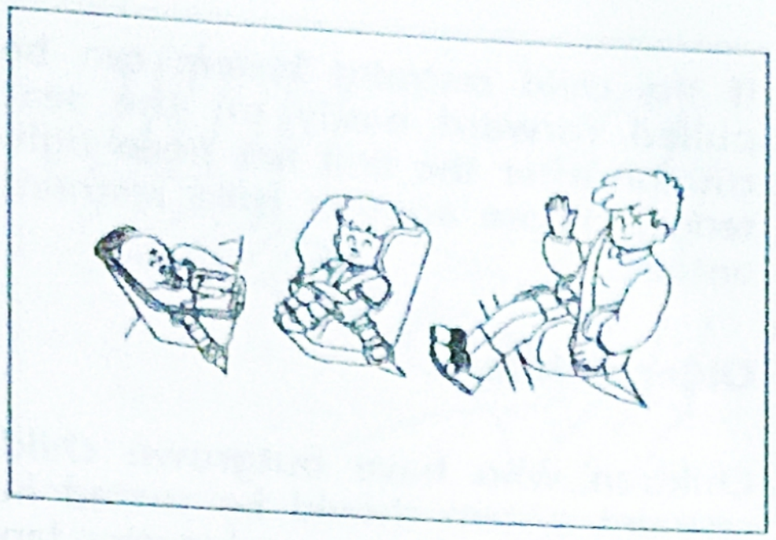
DOIAW002R3013

Adjustable seat belt anchor (front seats)

The seat belt anchor height can be adjusted. Move the seat belt anchor down with the lock knob depressed. To move the anchor up, slide it without depressing the lock knob.

⚠ CAUTION

When adjusting the seat belt anchor, set it at a position that is sufficiently high so that the belt will make full contact with your shoulder but will not touch your neck.



DOIAW004R3014

Child restraint OWN004SEATS005MC

When transporting children in your vehicle, some type of child restraint system should always be used according to the size of the child. This is required by law in most countries.

The regulations concerning driving with children in the front seat may differ from country to country. It is recommended that you obey the pertinent regulations.

⚠ WARNING

(1) Accident statistics indicates that children are safer when properly restrained in the rear seat rather than in the front seat. Accordingly, PROTON recommends the child be restrained in the rear seat.

(2) Holding a child in your arms is no substitute for a restraint system. Failure to use a proper restraint system can result in severe or fatal injury to your child.

(3) Each restraint device or fixing is to be used only by one child.

(4) Extreme Hazard! Do not use a Rear-facing child restraint on the front passenger seat with an air bag in front of it! The force of an inflating passenger air bag could push that restraint into the seatback, and that causes serious injury.

(5) REAR-FACING CHILD RESTRAINTS should only be used in the rear seat.

(6) FRONT-FACING CHILD RESTRAINTS should be used in the rear seat whenever possible; if used in the front seat, adjust the seat as far back as possible.

Infants and small children

For infants small enough for infants seats, an infant carrier should be used For small children whose height when seated allows the shoulder belt to lie in contact with the face or the throat, a child seat should be used.

The child restraint system should be appropriate for your child's weight and height and properly fit the vehicle. For a higher degree of safety, THE CHILD RESTRAINT SYSTEM SHOULD BE INSTALLED IN THE REAR SEAT.

When installing a child restraint system, refer to the instructions provided by the manufacturer of the restraint system. Failure to do so can result in severe or fatal injury to your child. When not in use, keep your child or infant seat secured with the seat belt or remove it from the vehicle in order to prevent injury to your child.

NOTE

Before purchasing a child seat or infant carrier, try installing it in the rear seat to assure a good fit. Due to the location of the seat belt buckles in the seat cushion, it may be difficult to securely install some child restraint systems.

If the child restraint system can be pulled forward easily on the seat cushion after the belt has been tightened, choose another child restraint system.

Older children

Children who have outgrown child restraint system should be seated in the rear seat and wear combination lap shoulder belt.

The lap belt should be snug and positioned low on the abdomen so that it is below the top of the hipbone. Otherwise, the belt could intrude into the child's abdomen during an accident and cause personal injury.

⚠ CAUTION

(1) Children who aren't buckled up can be thrown out of the vehicle in an accident.

(2) Children who aren't buckled up can strike other people who are.

(3) A child should never be left unattended in your vehicle. When you leave the vehicle, take the child out as well.

Pregnant women restraint

OWN004SEATS006MC

⚠ WARNING

Proton recommends that pregnant women use the available seat belts. This will reduce the likelihood of injury to both the woman and the unborn child. The lap belt should be worn across the thighs and as snug against the hips as possible, but not across the waist. The woman's doctor should be consulted if there are any questions.

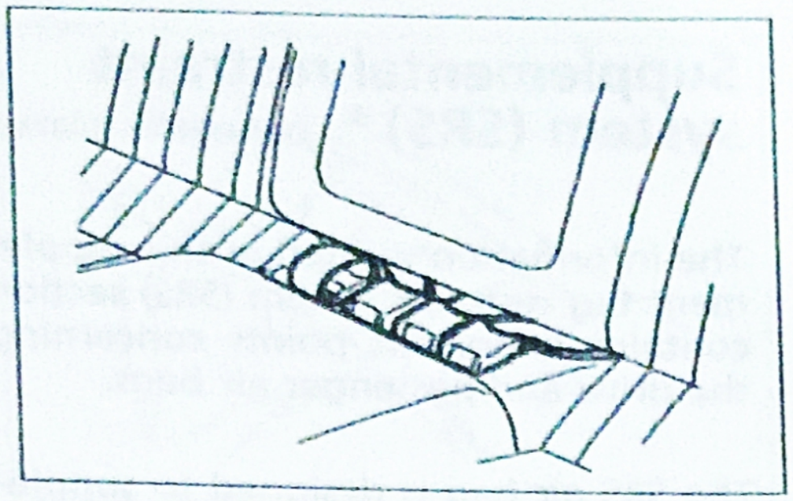
Seat belt inspection

OWN004SEATS055MC

1. Check the belts for cuts, worn or frayed webbing and for cracked or deformed metallic part. Replace the belts if defective.
2. A dirty belt should be cleaned with neutral detergent in warm water. After rinsing in water, let it dry in the shade. Do not attempt to bleach or re-dye the belts because this effects their characteristics.

⚠ CAUTION

All seat belts assemblies including rectractors and attaching hardware should be inspected by an authorised dealer after any collision. We recommend that seat belts assemblies in use during a dlision be placed.



DOIAW002R3049

Rear seat belts tray

OWN004SEATS056MC

When the seat belt is not in use, place it in the storage tray.

Seat belts tips

⚠ WARNING

(1) Seat belts are designed to bear upon bony structure of the body, and should be worn low across the front of the pelvis or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belts across the abdominal area must be avoided. Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed.

(2) A slack belt will greatly reduce the protection afforded to the wearer. Belts should not be worn with straps twisted.

(3) Care should be taken to avoid contamination of the webbing with polish, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water.

(4) The belt should be replaced if webbing becomes frayed, contaminated or damaged. It is essential to replaced the entire assembly after it has been worn in a severe impact even if damaged to the assembly is not obvious.

(5) Each seat belt assembly must be only used by one occupant; it is dangerous to put a belts\ around a child been carried on the occupant's lap.

(6) No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove the slack.

(7) When fastening the front seat belt and the rear seat belt with an emergency locking retractor, take up slack in the belt, pull the shoulder strap through the tongue until the belt fits snugly. Then return the shoulder belt to its retractor until the shoulder strap also fits snugly.

(8) Make it a rule to have all the passengers including the driver fasten the seat belts before starting the car.

Supplemental restraint system (SRS) * OWN004SEATS007MC

The information written in this supplement tag restraint system (SRS) section contains important points concerning the drive and passenger air bags.

The SRS air bag is designed to supplement the seat belts to provide those occupants with protection against head and chest injuries in certain moderate-to-severe frontal collisions.

The SRS air bag is NOT a substitute for the seat belts; seat belt should ALWAYS be worn.

⚠ WARNING

IT IS VERY IMPORTANT TO ALWAYS WEAR YOUR SEAT BELT, EVEN WITH AN AIR BAG:

(1) Seat belts help keep the passenger properly positioned.

(2) Seat belts reduce the risk of injury in rollovers, side or rear impact collisions, and in lower-speed frontal collisions, because the air bag is not designed to inflate in those situations.

(3) Seat belts reduce the risk of being thrown from your vehicle in a collision.

⚠ WARNING

IT IS VERY IMPORTANT TO BE PROPERLY SEATED, EVEN WITH AN AIR BAG.

(1) Air bags inflate very fast, and with great force. If you are not properly seated, the air bag may not protect you properly, and could cause injury when deployed.

(2) Before driving, adjust the driver's seat as far back as possible while still maintaining complete control of the vehicle.

(3) With your seat belt properly fastened, sit in an upright position, with your back against the seat back.

(4) Do not lean with your head or chest close to the steering wheel. On vehicles with air bag for front passenger, pay attention to the following items (5) through (7).

(5) Before driving, adjust the front passenger seat as far back as possible.

* if fitted

(6) Do not lean with your head or chest close to the instrument panel.

(7) Infants and small children should be properly seated in child restraint system. See the "Child restraint" section of this owner's handbook.

REAR- FACING CHILD RESTRAINTS must NOT be used in the front seat of this vehicle, because the force of an inflating passenger air bag could push that restraint into the seat back, causing serious injury. Rear-facing child restraints should only be used in the rear seat.

FRONT- FACING CHILD RESTRAINTS should be used in the rear seat whenever possible; if used in the front seat, adjust the seat as far back as possible.

DOIBW004R6002

Air bag system

The driver's air bag is located under the padded cover in the middle of the steering wheel.

The air bag are designed to inflate only in severe frontal collision. The air bags are not designed to inflate in certain lower-speed frontal collisions, in rollovers, or in side or rear impact collisions.

When the impact sensors detect an impact of sufficient frontal force, their switches close a circuit which ignites materials in the inflator to generate nitrogen gas and inflate the air bags.

The air bags deflate very rapidly after deployment, so there is little danger of obscured vision The air bag deployment produces a sudden, loud noise, and release some smoke and powder, but these conditions are not injurious, and do not indicate a fire in the vehicle. Mild discomfort may result from the deployment of the air bag due to the sudden inflation of the device. The air bag may not inflate in certain frontal collisions, even though the vehicle may be severely damaged. Such non-inflation does not mean that something is wrong with the SRS system, but rather that the collision forces were not severe enough to activate it.

⚠ WARNING

(1) Do not attach anything to the steering wheel padded cover, such as trim material, badges, etc. It might Injure the driver If the air bag inflates.

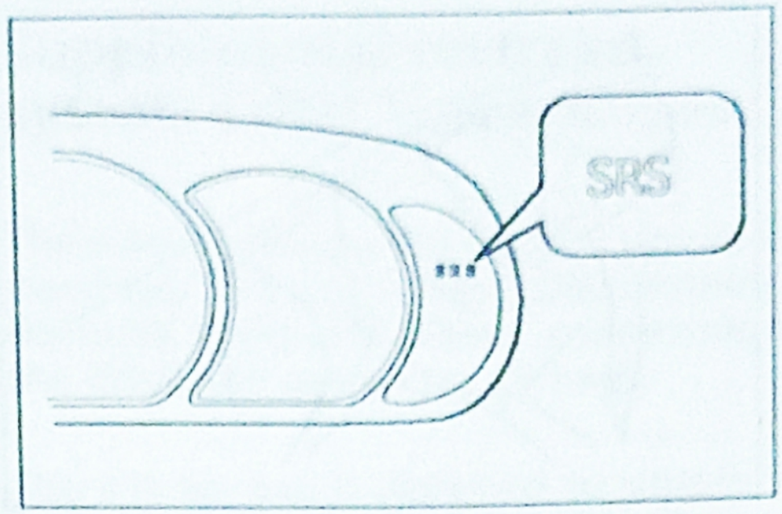
(2) On vehicle with air bag for front passenger, do not set anything on, or attach anything to the instrument panel above the glove box. It might Injure the passenger if the SRS bag Inflates.

(3) Do not attach accessories to or put them in front of the windshield. These objects could restrict air bag Inflation or be hurled against an occupant and cause serious Injury.

(4) Following the air bag inflation, several air bag system components will be hot. Do not touch them after inflation.

(5) The air bag system is designed to work only once. After the air bags deploy, they will not work again. They must promptly be replaced, and the entire air bag system inspected, by an authorised PROTON dealer.

(6) If the vehicle becomes involved in a frontal collision but the air bags are not inflated, be sure to have the air bag system checked and, if necessary, replaced by an authorised Proton dealer.



DOIAW003R0080

SRS warning lamp

There is a supplemental restraint system ("SRS") warning lamp on the instrument panel. The system checks itself and the lamp tells you if there is a problem. When the ignition key is turned to the "ON" or "START" position, the warning lamp should illuminate for about 7 seconds and then should go out. This means the system is ready.

⚠ WARNING

If any of following conditions occur, the SRS is not working properly, and you should immediately have it inspected by an authorised PROTON dealer:

- The SRS warning lamp does not go off after about 7 seconds.
- The SRS warning lamp illuminates while driving.

SRS servicing

The entire SRS system must be inspected by an authorised Proton dealer at 10 years.

⚠ WARNING

(1) Any maintenance performed on or near the components of the SRS must be performed only by an authorised Proton dealer. Do not permit anyone else to do service, inspection, maintenance or repair on any SRS components or wiring, similarly, no part of the SRS system should ever be handled or disposed of by anyone except an authorised PROTON dealer.

Improper work on the SRS components or wiring could result in inadvertent deployment of the air bags, or could render the SRS system inoperative; either situation could result in serious injury.

(2) Do not modify your steering wheel, seat belt retractor or any other SRS components. For example, replacement of the steering wheel, or modifications to the front bumper or body structure can adversely affect SRS performance and lead to possible Injury.

(3) If your vehicle has received any front-end damage, you should have the SRS system inspected by an authorised PROTON dealer to ensure it is in proper working order.

(4) The SRS sensors is located under the centre console. If the carpeting has been soaked or if there has been standing water on the floor,DO NOT ATTEMPT TO START THE CAR. This may cause air bag deployment. Disconnect the battery and have the car towed to an authorised Proton dealer for repairs.

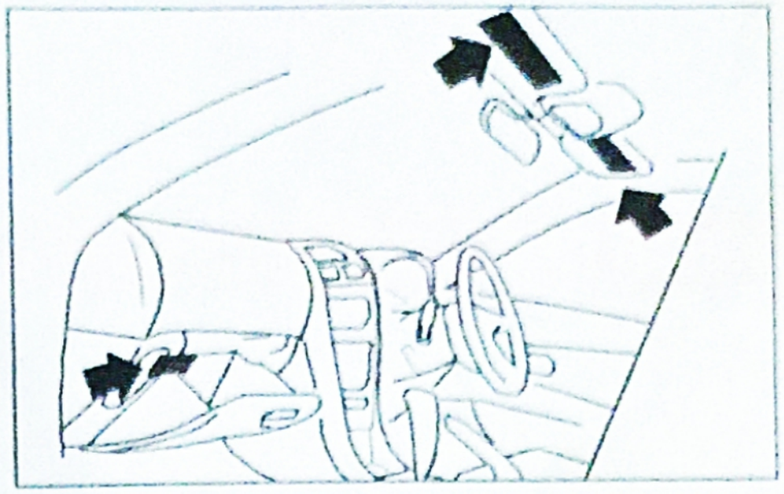
NOTE

(1) When you transfer ownership of the vehicle to some other person, we urge you to alert the new owner that it is equipped with the SRS system and refer that owner to the applicable section in this owner's handbook.

(2) If you junk or scrap the vehicle, we urge you to first take the vehicle to an authorised PROTON dealer so that the SRS system can be rendered safe.

(3) The SRS system is only activated once in a collision. If the air bag have been deployed, we recommend the following:

- Have the vehicle towed to a Proton workshop. Even if the car can be driven after a collision, we do not recommend driving the car with deployed air bag.
- Have an authorised Proton workshop change the SRS system components.
- Use only Proton original parts when replacing the SRS components.



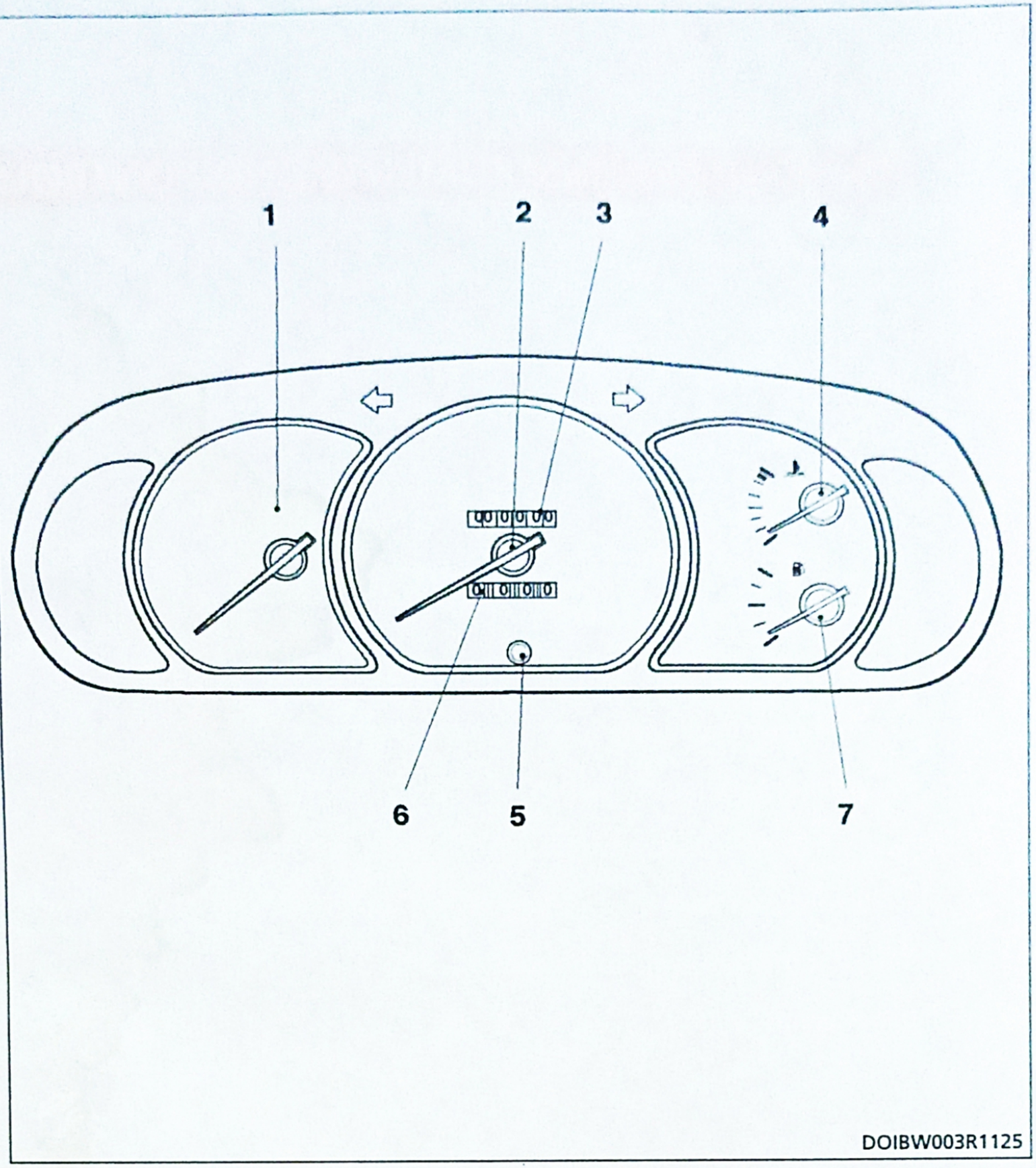
DOIBW002R1124

Service and information label

Service and information labels are attached as shown in the illustration.

INSTRUMENTS AND CONTROLS

Instruments	38
Speedometer	39
Odometer/Tripmeter	39
Tachometer	39
Fuel gauge	40
Water temperature gauge	40
Indication and warning lamps	41
Combination headlight, dipper and turn signal lever	44
Rear window wiper and washer switch(Aeroback)	47
Hazard warning flasher switch	48
Rear window demister switch	48
Front fog lamp switch	49
Rheostat (meter illumination control)	49
Room lamps	50

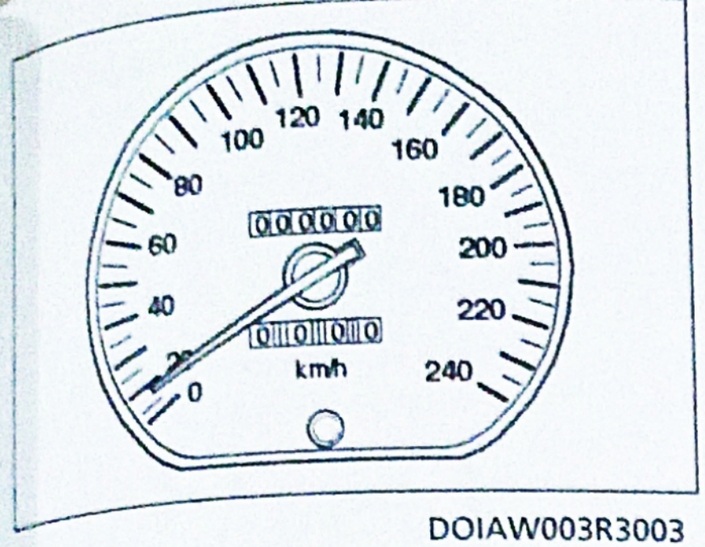


DOIBW003R1125

Instruments

OWN005INSCO001MC

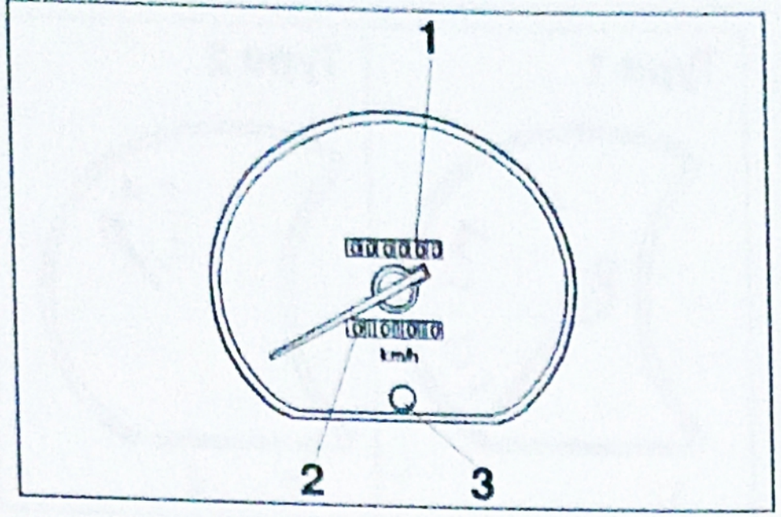
1 - Tachometer
2 - Speedometer
3 - Odometer
4 - Water temperature gauge
5 - Tripmeter reset button
6 - Tripmeter
7 - Fuel gauge



DOIAW003R3003

Speedometer OWN005INSCO002MC

The speedometer indicates the vehicle's speed in kilometers per hour (km/h).

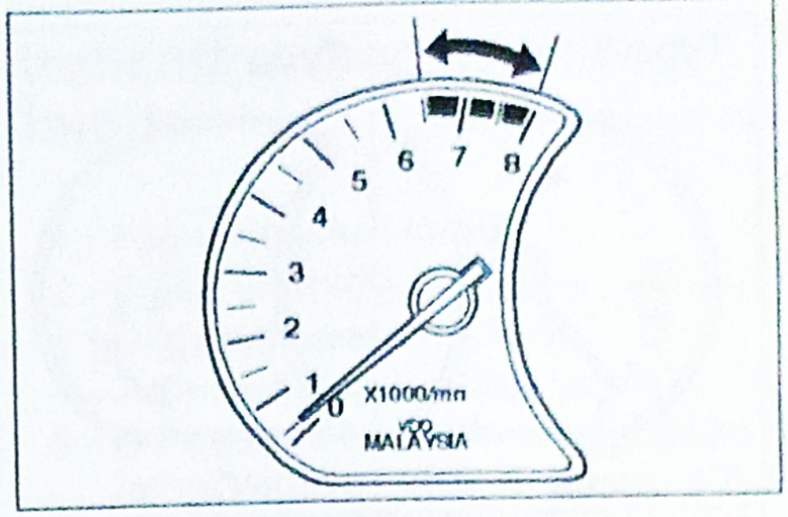


DOIAW003R1126

Odometer/Tripmeter OWN005INSCO003MC

1 - Odometer.
The odometer indicates the total distance the vehicle has travelled.

2 - Tripmeter.
The tripmeter indicates the distance travelled during a particular trip or period. To return the indication to zero, press and hold the reset button (3) until the display reset to zero.



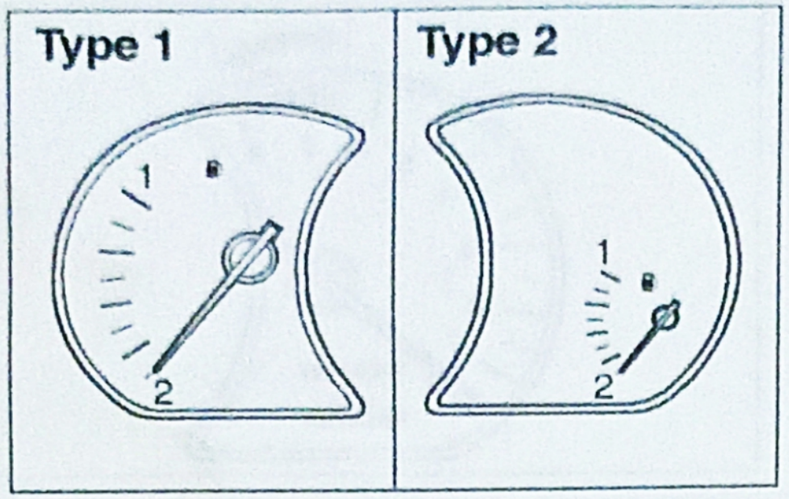
DOIAW003R3005

Tachometer OWN005INSCO004MC

The tachometer indicates the engine speed (r/min). The tachometer can help you obtain more economical driving and also warns you of excessive engine speeds.

⚠ CAUTION

During travel, watch the tachometer to be sure that the engine speed indication does not rise to the red zone (range of the excessive engine rpm).



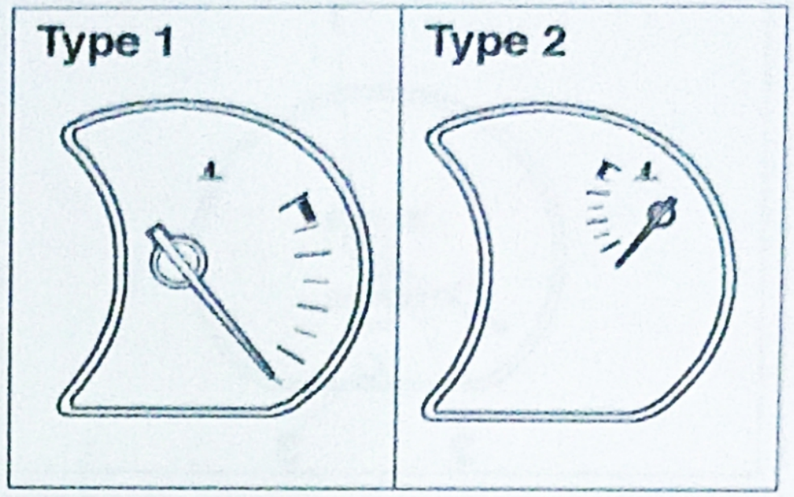
DOIAW003R8883

Fuel gauge

OWN005INSCO005MC

The fuel gauge indicates the fuel level in the fuel tank when the ignition switch is at the ON position.

1 - Full
2 - Empty



DOIAW003R1128

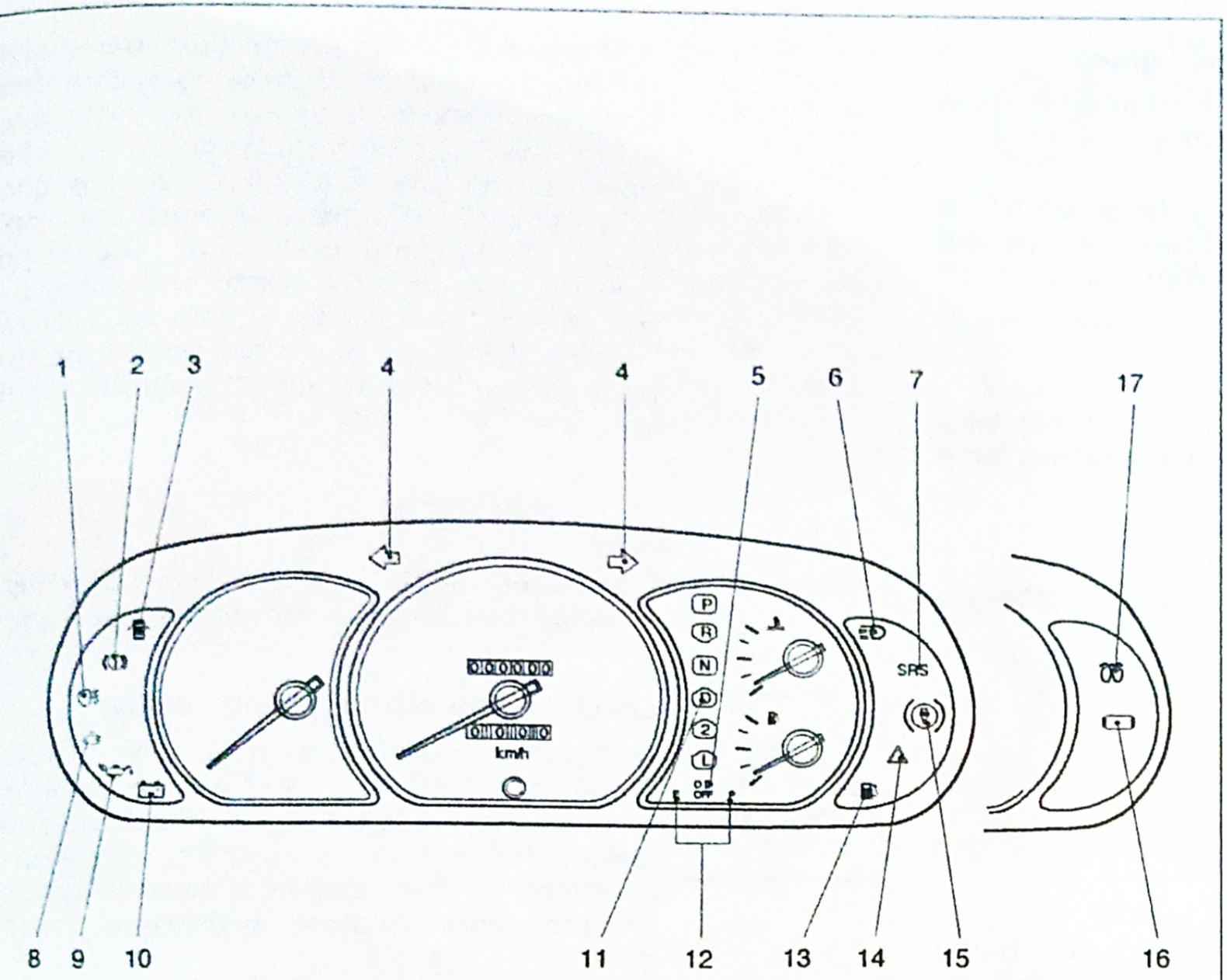
Water temperature gauge

OWN005INSCO006MC

The water temperature gauge indicates the engine coolant temperature when the engine is running.

⚠ CAUTION

If the indication needle enters the red zone while the engine is running, it probably indicates that the engine is overheated. Immediately park your vehicle in a safe place and make the necessary corrections (refer to "Engine overheating") While driving, care should always be taken to maintain the normal operating temperature.



DOIAW005R8810

Indication and warning lamps

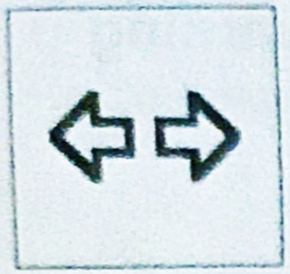
OWN005INSCO007MC

1 - Fog indication lamp
2 - Brake warning lamp
3 - Door-ajar warning lamp
4 - Turn-signal indication lamps
5 - Overdrive off indication lamp(Vehicle with 4–speed automatic transmission)
6 - High-beam indication lamp
7 - SRS warning lamp *
8 - Engine warning lamp
9 - Oil pressue warning lamp
10 - charge warning lamp
11 - Automatic transmission indication lamp (vehicle with A/T only). Refer to page *
12 - POWER/ECONOMY indication lamp (Vehicle with 4–speed automatic transmission)
13 - Low fuel warning lamp
14 - Hazard warning indication lamp
15 - Anti-lock brake system indication lamp
16 - Fuel filter warning lamp (Diesel-powered vehicle *
17 - Diesel preheat indication lamp (Diesel-powered vehicle) *

NOTE

To find information concerning the indication or warning lamps, refer to the specified section. For the other indication and warning lamps, refer to the subsequent pages.

* if fitted



Turn-signal indication lamps - green

These indication lamps blink on and off when a turn-signal lamp is operating.

When the hazard warning lamp switch is pressed, the turn-signal indication lamps and all turn-signal lamps will flash on and off continuously.

NOTE

If the blinking is too fast, the cause may be a faulty turn-signal connection or a blown lamp bulb.

Door-ajar warning lamp-red

This lamp illuminates when a door is either open or incompletely closed.

⚠ CAUTION

Before moving your vehicle, check that the warning lamp is OFF.

Brake warning lamp - red

With the ignition switch "ON", the brake warning lamp illuminates under the following conditions: When the parking brake lever has been applied. When the brake fluid level in the reservoir falls to low level.

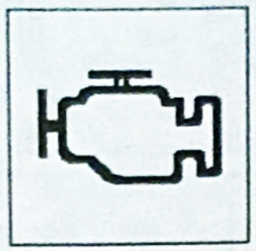
⚠ CAUTION

If the brake warning lamp does not illuminates when you pull the parking brake lever, contact your nearest authorised Proton dealer immediately.

If the brake warning lamp illuminates while driving, it could mean braking system deterioration. Park your vehicle in a safe place using the following procedures. If, when pressing the brake pedal braking is poor, press your foot harder against the brake pedal. Should the brakes fail, use engine braking to reduce the speed and slowly pull the parking brake lever to park your vehicle. Depress the brake pedal to operate the stop lamp (brake lamp) to alert the vehicle behind you.

⚠ CAUTION

Suddenly applying the parking brake is dangerous because the wheels can lock.



Check engine warning lamp - amber

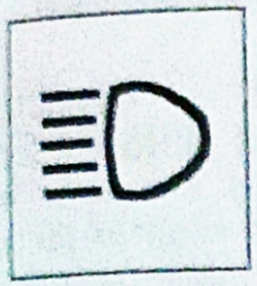
This lamp illuminates when the ignition switch is turned "ON" and will go out a few seconds after engine starts. If it illuminates while the engine is running, there is a problem in the emission control system. Contact your nearest authorised Proton dealer.

Oil pressure warning lamp - red

This lamp illuminates when the ignition switch is turned "ON" and goes off after the engine has started. If it illuminates while the engine is running, the oil pressure is too low. If the warning lamp illuminates while the engine is running, stop your vehicle when safe to do so and turn the engine off. Contact your nearest authorised Proton dealer for inspection.

⚠ CAUTION

If this lamp illuminates when the engine oil level is not low, contact your nearest authorised Proton dealer for inspection. This warning lamp does not indicate the amount of oil in the crankcase. This must be determined by checking the oil level in the dipstick, while the engine is turned off. If you continue driving with low engine oil level or with this warning lamp illuminated, seizure of the engine may occur.



High-beam indication lamp-blue

This lamp illuminates when the high beam is used.

Low fuel warning lamp-amber

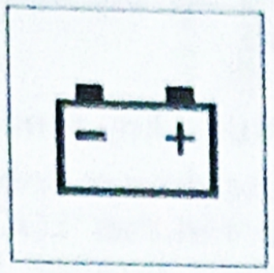
This lamp illuminates when the fuel level in the fuel tank falls to a low level. If it illuminates, fuel should be replenished.

⚠ CAUTION

Do not drive with an extremely low fuel level; running out fuel could cause damage to the catalytic converter.

Front fog lamp indication lamp-green *

This lamp illuminates while the front fog lamp is on.



Charge warning lamp—red

This illuminates when the ignition switch is turned "ON", and goes off after the engine has started. If it illuminates while the engine is running, there is a problem in the charging system. In this case, stop your vehicle when safe to do so and park your vehicle in a safe place. Contact your nearest authorised dealer.

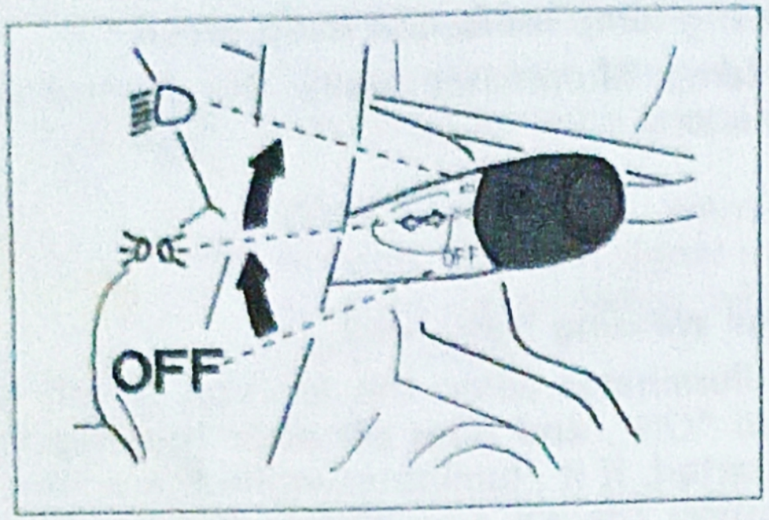
Fuel filter warning lamp — amber(Diesel — powered vehicles only)

This lamp illuminates when the ignition switch is turned to the "ON" position and goes off after the engine has started. If it lights up while the engine is running, it indicates that water has accumulated in side the fuel filter; if this happens, remove the water from the fuel filter.

Diesel preheat indication lamp-red (Diesel-powered vehicles)

The indication lamp illuminates red when the ignition switch is placed at the "ON" position. As the glow plug becomes hot, the lamp goes out and the engine can be started.

* if fitted



DOIAW003R3016

Combination headlight, dipper and turn signal lever

OWN005INSCO008MC

Headlights

Rotate the switch to turn on the lights.

OFF	Lights off
	Position, tail, licence-plate and instrument panel lamps on
	Headlights on

Light monitor system

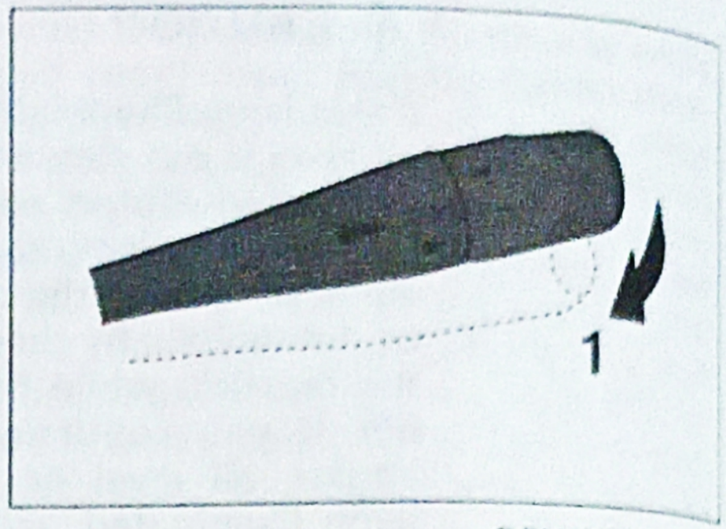
If the drivers door is opened with the light switch at " " or " " position, a continuous buzzer will sound to remind the driver to turn off the lights. Turn off the light and the buzzer will stop

Ignition key reminder

If the drivers door is opened when the key is in the "LOCK" or "ACC" position, a short interval buzzer will sound to remind the driver to take out the key from the ignition switch. Take out the ignition key and the bezzer will stop.

NOTE

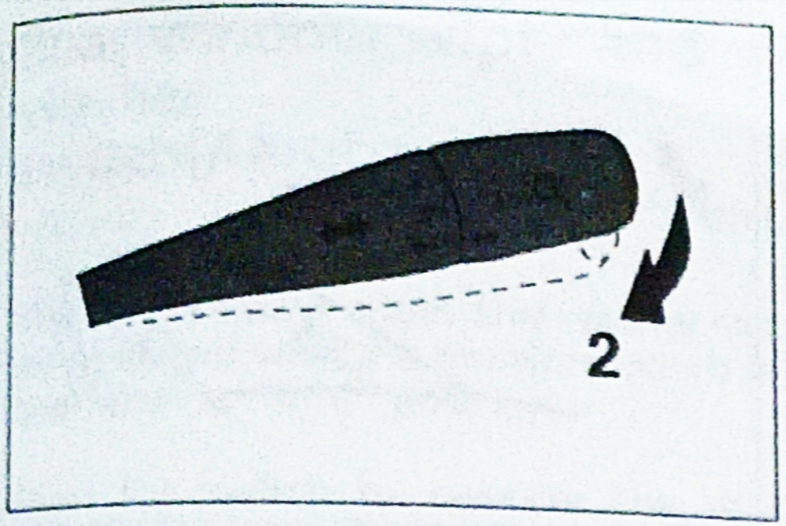
Do not leave the headlights and other lamps on for a long while the engine is stationary. A run-down battery could result.



DOIAW003R3017

Dipper (High/Low beam change)

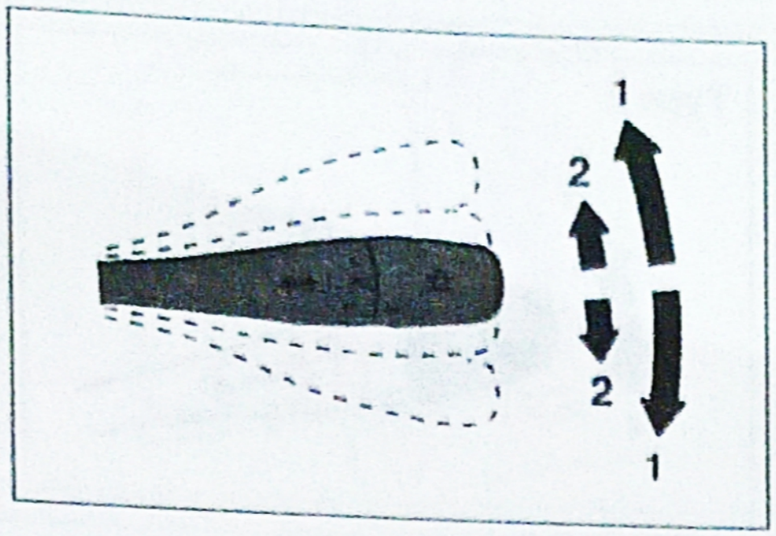
When the light switch at " " position, the beam changes from high to low (or low to high) each time the lever is pulled to (1). While the high beam is on, the high beam indication lamp in the instrument cluster will also illuminate.



DOIAW003R3018

Headlight flasher

The headlights flash when the lever is pulled slightly to (2), and will go off when it is released. When the high beam is on, the high beam indication lamp in the instrument cluster will also illuminate.



DOIAW003R3019

Turn/lane-change signals

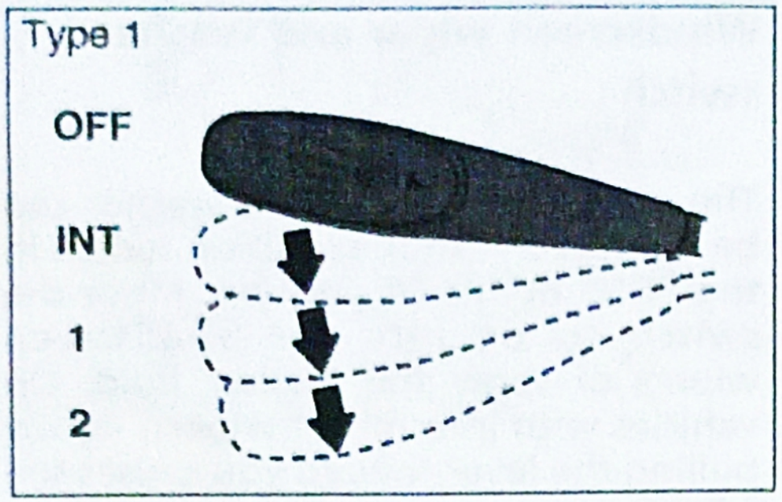
The turn-signal lamps flash when the switch is operated irrespective of the ignition switch position. At the same time, the turn signal indicator in the meter flashes.

1 - Turn-signals
When making a normal turn, use this position. The lever will return automatically when cornering is completed. There are times when the lever will not return after cornering. This occurs when the steering wheel is turned only slightly. In such cases, return the lever by hand.

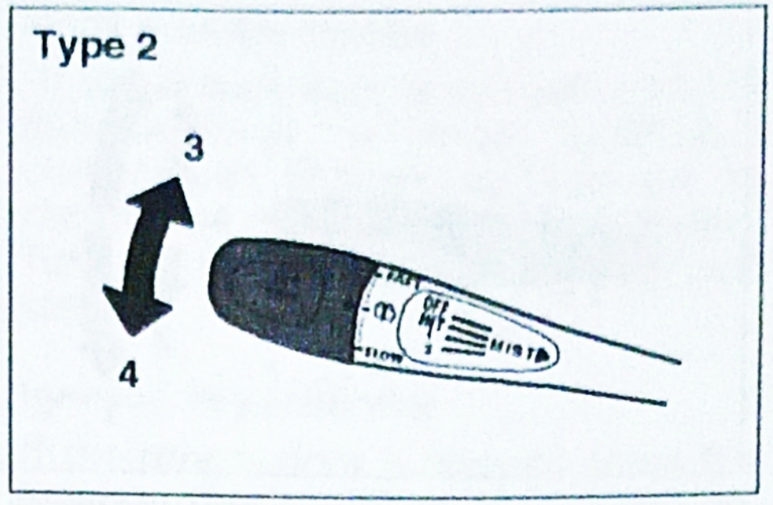
2 - Lane-change signals
When changing lanes, use this position. It will return to the neutral position when released.

Windscreen wiper and washer switch

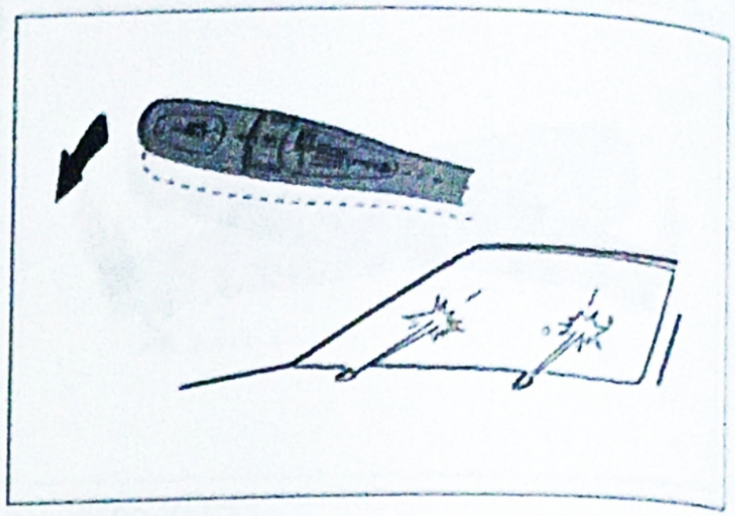
The windscreen wiper and washer can be operated with the ignition switch in the "ON" or "ACC" position. Move the switch to operate the windscreen wipers or spray the washer fluid. On vehicles with intermittet wipers, lightly pulling the lever toward you causes the wipers to operate once (misting function).



DOIAW003R3020



DOIAW003R3021



DOIAW003R3022

Windscreen wipers

OFF - Off

INT - Intermittent operation

1 - Slow

2 - Fast

On vehicles with the variable intermittent type, the intermittent intervals are adjustable from 2 to 15 seconds by turning the adjusting knob.Turn the knob toward you to extend the intermittent intervals.

3 - Fast

4 - Slow

Windscreen washer

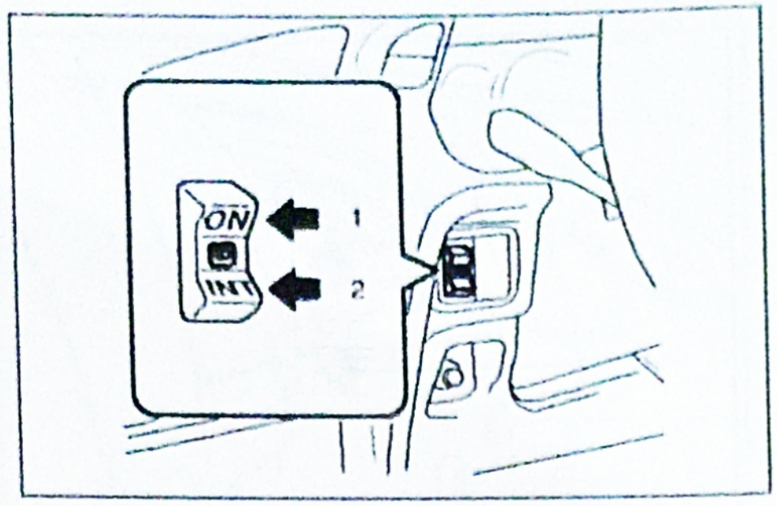
The washer fluid will be sprayed onto the windscreen by moving the lever in the direction of the arrow. On vehicles with intermittent wipers, the wipers operate automatically 2 or 3 times while the washer fluid is being sprayed.

Rear window wiper and washer switch(Aeroback) *

OWN005INSCO050MC

The rear window wiper and washer can be operated with the ignition switch in the "ON" or "ACC" position.

Push the switch to operate the rear window wiper or spray the washer fluid.

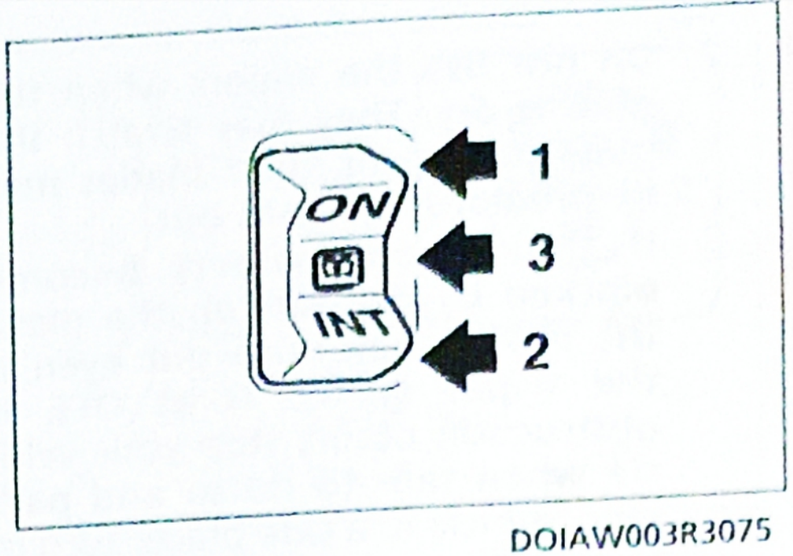


DOIAW003R3074

Rear window wiper

1 - Continuous operation
Push down the switch all the way at its upper end for continuous operation of the wiper. To stop opertion, push the switch lightly at its lower end.

2 - Intermittent operation
Push the switch at its lower end for intermittent operation of the wiper. To stop operation, push the switch lightly at its upper end.



DOIAW003R3075

Rear window washer

To use while the wiper is operating press fully (1) or (2) side of the switch; to use while the wiper is not operating, press (3) of the switch.

The washer fluid will be sprayed on to the rear window while the switch is being pushed.

NOTE

The rear window washer reservoir tank is in the engine compartment.

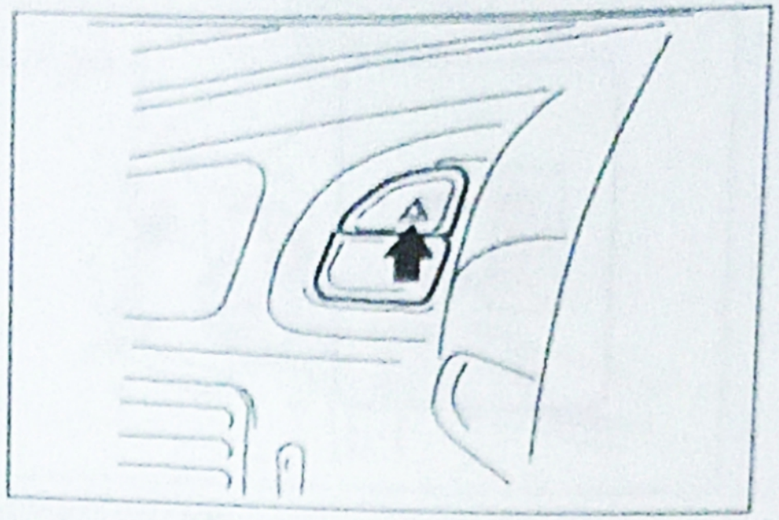
Precaution to observe when using wipers and washers

1 - Avoid using the washer continuously for more than 20 seconds. Do not operate the washer when the fluid reservoir is empty. The motor may burn out.

* if fitted

2 - Do not use the wipers when the glass is dry. They may scratch the glass surface or their blades may be prematurely worn out.

3 - If the moving wipers become blocked by deposits on the glass, the motor may burn out even if the wiper switch is at OFF. If obstruction occurs stop your vehicle when safe to do so and park your vehicle in a safe place. Turn of the ignition, and clean the deposits from the glass so that the wipers operate smoothly.



DOIAW003R3025

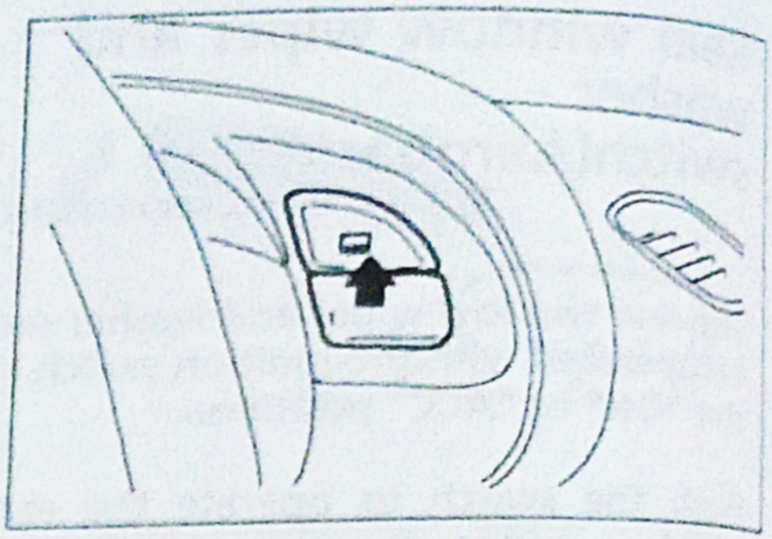
Hazard warning flasher switch

OWN005INSCO009MC

Use the hazard warning flasher switch when the vehicle has to be parked on the road for any emergency. The hazard warning flashers can always be operated, regardless of the position of the ignition key. Push the switch to turn on the hazard warning flashers; push the switch again to turn them off. When this switch is operated, all turn-signal lamps flash continuously, as do the turn-signal indication lamps.

⚠ CAUTION

If the lights are kept flashing for a long time, the battery will be discharged, resulting in hard engine starting or a no start condition.



DOIAW003R3026

Rear window demister switch

OWN005INSCO010MC

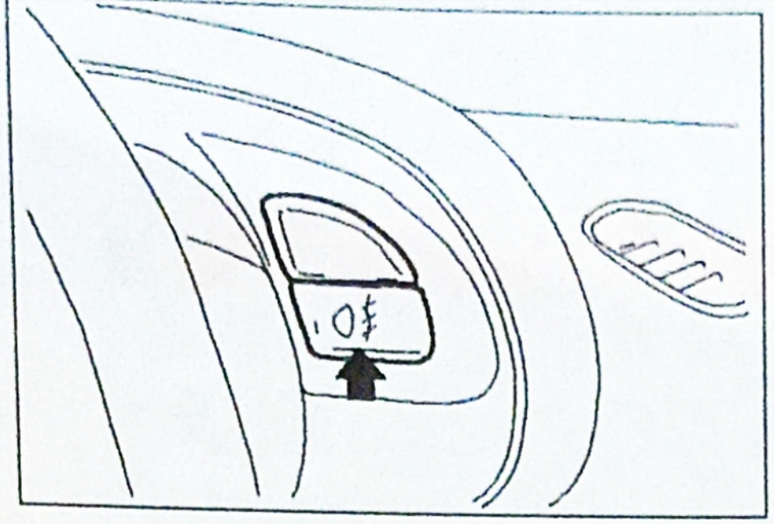
The rear window demister switch can be operated with the ignition switch at the "ON" position To turn on the rear window demister, press the switch.To turn off the demister press the switch once again.The indication lamp will illuminate while the demister is on.

⚠ CAUTION

(1) To avoid unnecessary discharge of the battery, do not use the rear window demister during starting of the engine or when the engine is not running. Turn the demister off immediately after the window is clear.

(2) When cleaning the inside of the rear window, use a soft cloth and wipe gently along the heater wires, being careful not to damage the wires.

(3) If an object is placed near the rear window, it might touch the wires due to vehicle vibration, possibly resulting in broken wires.



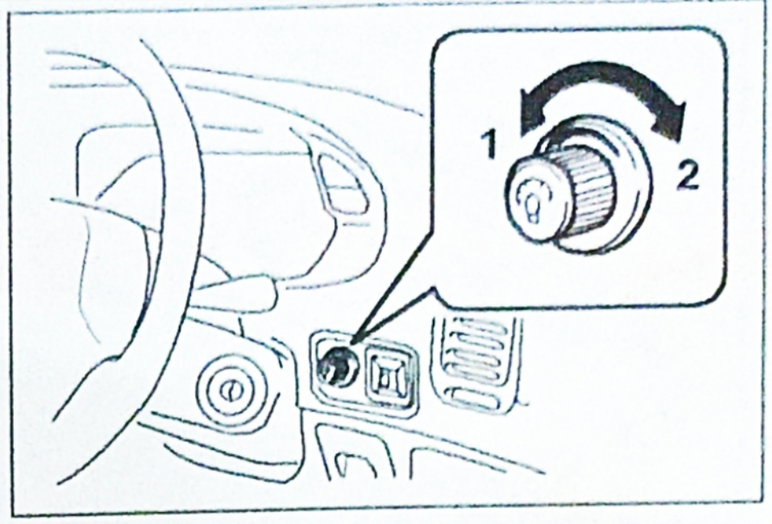
DOIAW003R1131

Front fog lamp switch

OWN005INSCO011MC

The front fog lamp switch can be operated when the light switch is at or position.

Press the switch to turn the front fog lamps on and depress the switch to turn it off. The front fog lamp indicator on the meter cluster will illuminates when the front fog lamp is turned on.



DOIAW003R3027

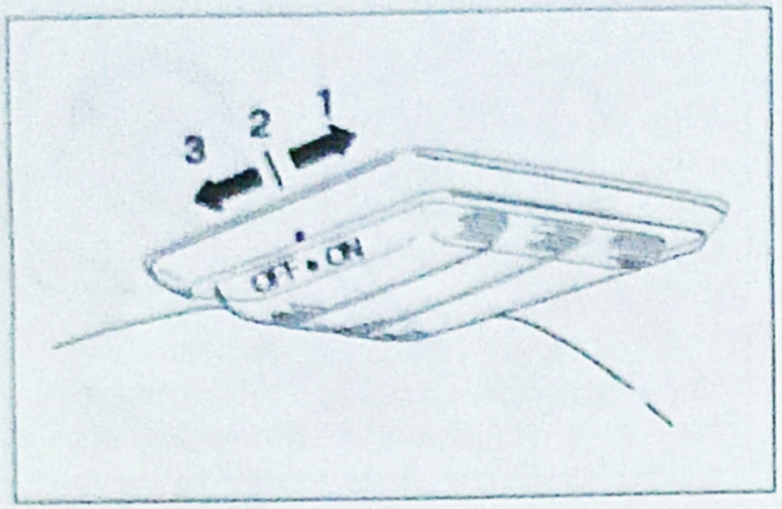
Rheostat (meter illumination control) *

OWN005INSCO012MC

The rheostat can be adjusted while the light switch is on. Turn the dial to adjust the meter illumination to the desired brightness.

1 - To increase brightness
2 - To reduce brightness

* if fitted



DOIAW003R8882

Room lamps OWN005INSCO013MC

1 (OFF) - The lamp goes out.

2 - The lamp illuminates when a door is opened and goes out when it is closed.

3 (ON) - The lamp illuminates.

STARTING AND DRIVING

Running-in recommendations	52
Fuel usage	53
Catalytic converter	54
Economical driving	55
Ignition switch	56
Starting	57
Manual transmission	59
Automatic transmission	61
Parking	64
Parking brake	65
Braking	66
Anti - lock brake system (A.B.S.)	67
Steering wheel height adjustment	69
Power steering system	69
Inside rear-view mirror	70
Outside rear-view mirrors	70
Electric remote-controlled outside rear-view mirrors	70

Running-in recommendations OWN006START001MC

During the running-in period of the first 1000 km (621.3 mile), it is advisable to drive your new vehicle using the following precautions as a guideline to aid long life as well as future economy and performance.

1. Do not race the engine at high speeds.
2. Avoid rapid starting, accelerating, braking and prolonged high-speed running.
3. Keep to the running-in speed limit shown below. Please note that the legal speed limits displayed must be adhered to.
4. Do not exceed loading limits.
5. Refrain from towing a trailer.

Vehicle with manual transmission

Drive range	Speed limit				
	1300	1500	1600	1800 (DOHC)	2000(1)
1 st	25 km/h (15.5 mph)	25 km/h (15.5 mph)	30 km/h (18.6 mph)	35 km/h (21.7 mph)	25 km/h (15.5 mph)
2 nd	45 km/h (27.9 mph)	45 km/h (27.9 mph)	50 km/h (31 mph)	55 km/h (34.1 mph)	45 km/h (27.9 mph)
3 rd	70 km/h (43.4 mph)	70 km/h (43.4 mph)	75 km/h (46.6 mph)	90 km/h (55.9 mph)	65 km/h (40.3 mph)
4 th	95 km/h (59 mph)	95 km/h (59 mph)	105 km/h (65.2 mph)	120 km/h (74.5 mph)	95 km/h (59 mph)
5 th	115 km/h (71.4 mph)	120 km/h (74.5 mph)	130 km/h (80.7 mph)	145 km/h (90 mph)	115 km/h (71.4 mph)

(1) Diesel-powered vehicle

Vehicles with automatic transmission

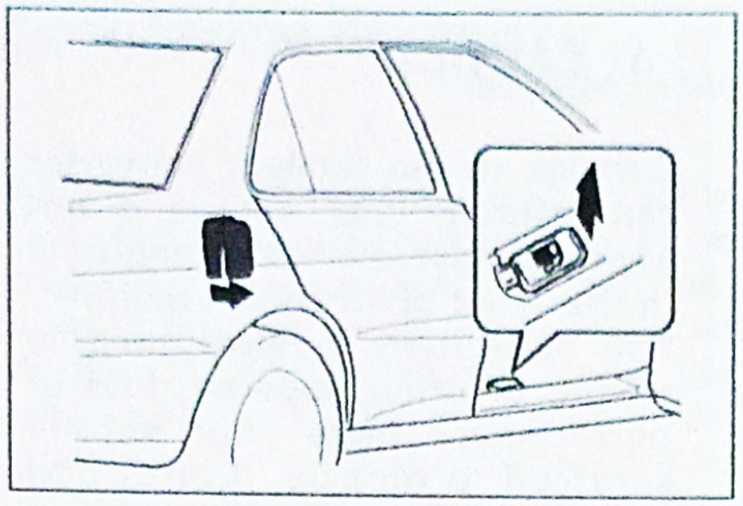
Drive range	Speed limit		
	1500	1600	1800
"L" (LOW)	35 km/h (21.7 mph)	35 km/h (21.7 mph)	40 km/h (24.8 mph)
"2" (SECOND)	65 km/h (40.3 mph)	65 km/h (40.3 mph)	75 km/h (46.6 mph)
"D" (DRIVE)	110 km/h (68.3 mph)	105 km/h (65.2 mph)(1) 155 km/h (96.3 mph)(2)	120 km/h (74.5 mph)(1) 180 km/h (111.8 mph)(2)

(1) With overdrive switched OFF
(2) With overdrive switched ON

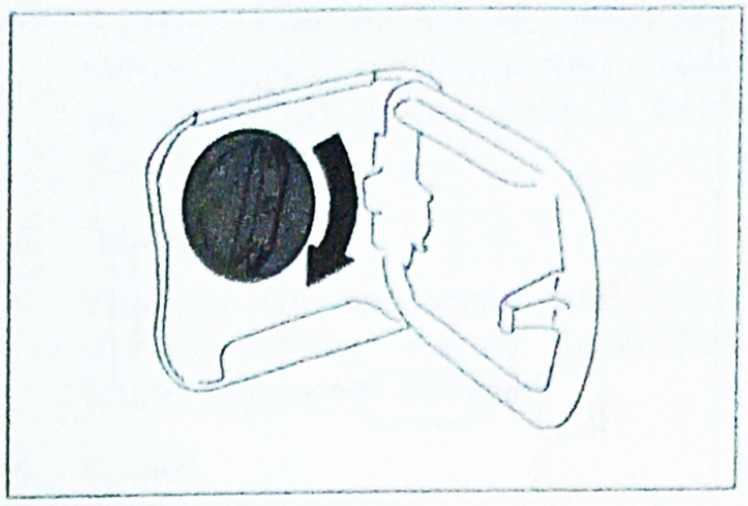
Fuel usage

OWN0065TART002MC

Recommended fuel	Petrol powered vehicle	Unleaded petrol octane rating (DIN 51607) 97RON or higher
Fuel tank capacity	50 lit (52.6 U.S.qts; 43.4 Imp.qts)	



DOIAW004R3001



DOIAW004R3002

Refueling

1. Before filling with fuel, stop the engine.

⚠ CAUTION

Fuel is explosive and combustible. Therefore when handling fuel, keep naked flames away from it. Do not smoke cigarettes.

2. Open the fuel filler door by using the release lever (located beside the driver's seat).
3. To fill with fuel correctly depends mainly on correct handling of the fuel filler gun into the tank port as far as it goes.
4. After the first automatic stop, do not fill with fuel more than 30 seconds.
5. After refueling, mount the tank cap and turn it clockwise.

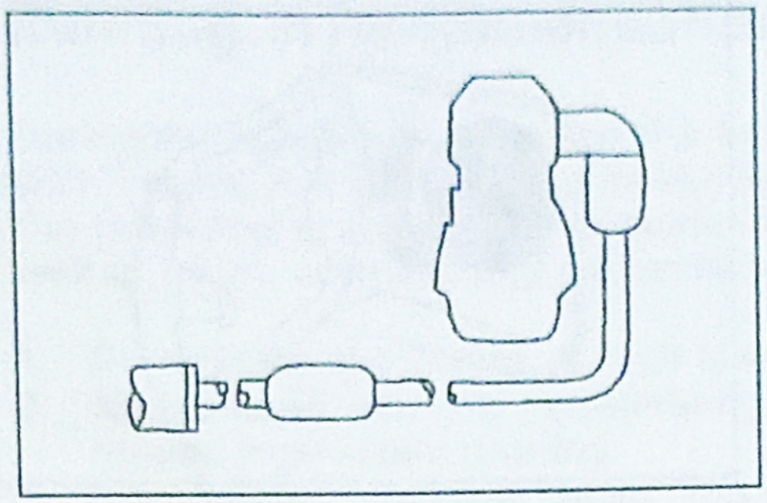
⚠ CAUTION

(1) These vehicles have label located on the fuel filler lid that states, "UNLEADED FUEL ONLY".

These vehicles also have fuel-filler tube specially designed to accept the smaller diameter unleaded fuel dispensing nozzles only. Under no circumstances should leaded petrol be used because it will damage the emission control system and may impair driveability and fuel economy.

(2) Do not let fuel spill on the exterior surfaces of the vehicle. Fuel may cause paint damage.

ONLY USE UNLEADED PETROL



DOIAW006R3090

Catalytic converter

OWN006START003MC

For ordinary use, there are no particular cautions except to use unleaded petrol.

The exhaust gas scavenging device with catalytic converter is extremely efficient for the reduction of noxious gases. The catalytic converter is installed in the exhaust system.

It is important to keep the engine properly tuned to assure proper catalyst damage.

⚠ CAUTION

Damage to the catalytic converter can result if your vehicle is not kept in proper operating condition. In the event of an engine malfunction particularly involving engine misfire or other apparent loss of performance have your vehicle serviced promptly. Continued operation of your vehicle with a severe overheated condition may result in possible damage to the converters and vehicle.

⚠ WARNING

(1) As with any vehicle, do not park or operate this vehicle in areas where combustible materials such as dry grass or leaves can come in contact with a hot exhaust since a fire could occur.

(2) An undercoating paint should not be applied to the catalytic converter.

The catalytic converter itself becomes hot quickly, and may be damaged if overheated. The following points should be noted in order to prevent the ignition of unburned petrol within the catalytic converter.

1 - Use UNLEADED PETROL ONLY of the type of recommended in FUEL USAGE on page 53.
2 - Do not drive with an extremely low fuel level; running out of fuel could cause damage to the catalytic converter.
3 - Do not switch OFF the ignition switch while driving.
4 - Do not try to start the engine by pushing the vehicle. If the battery is weak or discharged, use another battery to start the engine.
5 - Do not idle the engine with any spark plug wires disconnected or removed such as when performing diagnostic tests.
6 - Do not idle the engine with any spark plug cables disconnected or removed, such as during diagnostic testing.
7 - Do not race the engine when turning off the ignition switch to prevent catalytic converter from being damaged due to unburned fuel.
8 - Stop driving the vehicle if you think the performance is noticeably less, or that there is unnecessary engine rotation, or any other engine trouble, such as with the ignition, etc.
If it is impractical to stop driving immediately, reduce the speed and drive for only a short time. Have an inspection made by a nearby authorised PROTON dealer as soon as possible.

9 - In unusual situations involving grossly malfunctioning engine operation a burnt odor may indicate severe and abnormal catalyst overheating.
If this occurs, the vehicle should be stopped in a safe place, the engine shut off and the vehicle allowed to cool. Once the engine is cool, a service, including a tune-up to manufacturer's specifications, should be obtained immediately.

Economical driving

OWN006START004MC

For economical driving, there are some technical requirements that have to be met. The prerequisite for low fuel consumption is a properly adjusted engine. In order to achieve longer life of the vehicle and the most economical operation, have the vehicle serviced by an authorised PROTON dealer at regular intervals in accordance with the service standards.

Fuel economy and generation of exhaust gas and noise are highly influenced by personal driving habits as well as the particular operating conditions. The following points should be observed in order to minimize wear of brakes, tyres and engine as well as to reduce environmental pollution.

1. **Starting**

   Avoid rapid acceleration and sudden starts; such operation will result in higher fuel consumption.

2. **Shifting**

   Shift only at an appropriate speed and engine speed. Always use the highest gear possible.

3. **City traffic**

   Frequent starting and stopping increases the average fuel consumption. Use roads with smooth traffic flow whenever possible. When driving on congested roads, avoid use of a low gear at high engine speeds.

4. **Idling**

   The vehicle consumes fuel even during idling. Avoid extended idling whenever possible.

5. **Speed**

   The higher the vehicle speed, the more fuel consumed. Avoid driving at full speed. Even a slight release of the accelerator pedal will save a significant amount of fuel.

6. **Tyre inflation pressure**

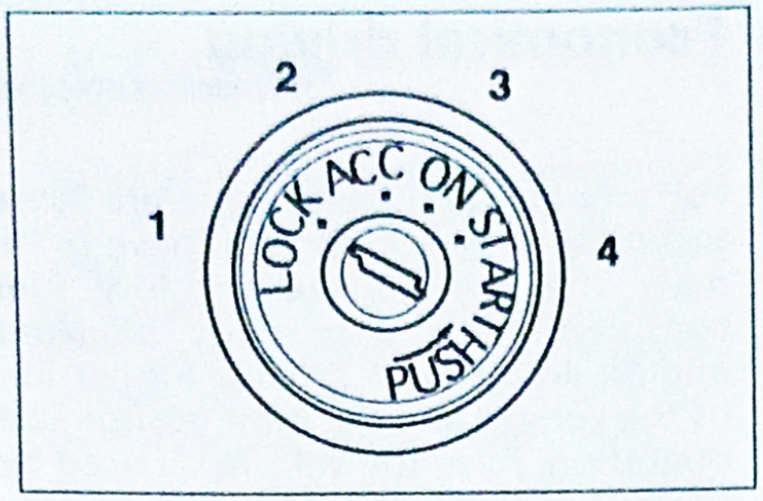
   Check the tyre inflation pressures at regular intervals. Low tyre inflation pressure increases road resistance and fuel consumption. In addition, low tyre pressures adversely affect tyre wear and driving stability.

7. **Load**

   Do not drive with unnecessary articles in the luggage compartment. Especially during city driving where frequent starting and stopping is necessary, the increased weight of the vehicle will greatly affect fuel consumption. Also avoid driving with unnecessary luggage, etc., on the roof; the increased air resistance will increase more fuel consumption.

8. Cold engine starting

Starting of a cold engine consumes more fuel. Unnecessary fuel consumption is also caused by keeping a hot engine running. After the engine is started, commence driving as soon as possible.



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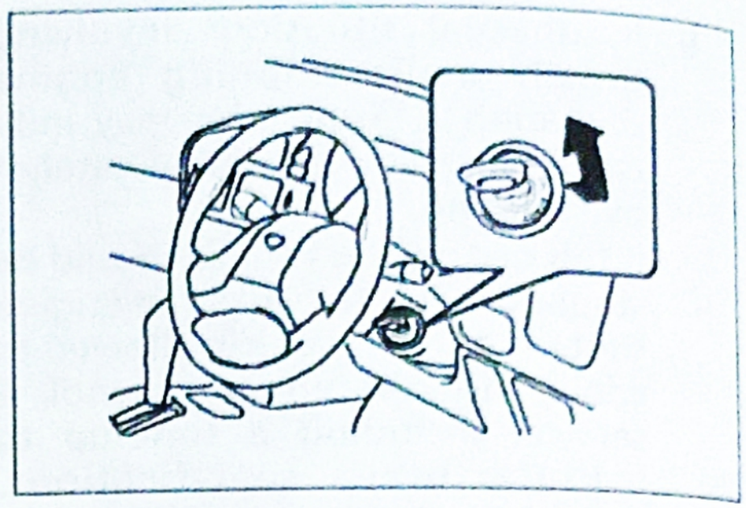


DOIAW004R3004

Ignition switch OWN006START005MC

1 - With the engine stopped, and the steering wheel is locked. The key can be inserted and removed only in this position.
2 - Engine stopped, radio, cigarette lighter, etc., can be operated.
3 - The engine is running and all electrical systems can be operated.
4 - The starter motor operates. After the engine has started, release the key and it will automatically return to the "ON" position.

NOTE

(1) To remove the key, push the key at the "ACC" position and keep it depressed until it is turned to the "LOCK" position, and remove.

(2) When the driver's door is opened, the ignition switch will be illuminated.

The ignition switch illumination remains on until approximately 10 seconds after the door is closed.

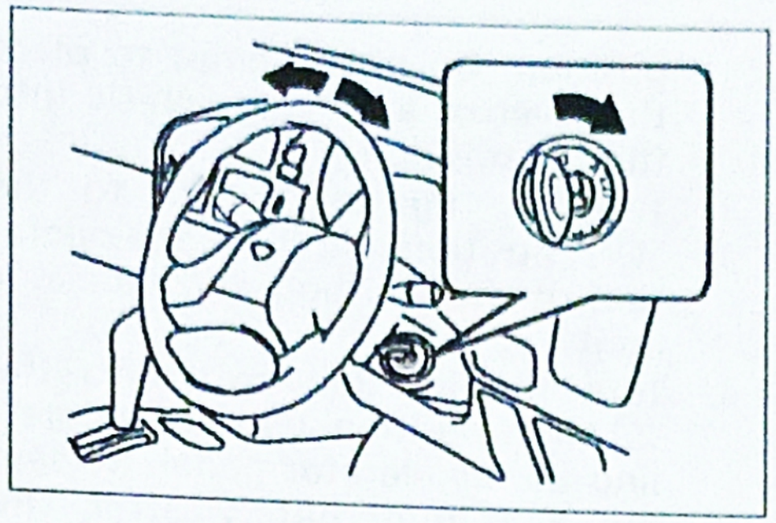
⚠ CAUTION

(1) Do not remove the ignition key from the ignition switch while driving. The steering wheel will be locked, causing loss of control.

(2) If the engine is stopped while driving, the brake servomechanism will cease to function and braking efficiency will deteriorate. Also, power steering system will not function and it will require greater manual effort to operate the steering.

(3) Do not leave the key in the "ON" position for a long time when the engine is not running; doing so will cause the battery to be discharged.

(4) Do not turn the key to the "START" position when the engine is running; doing so could damage the starter motor.



DOIAW004R3005

How to lock and unlock the steering wheel

To lock

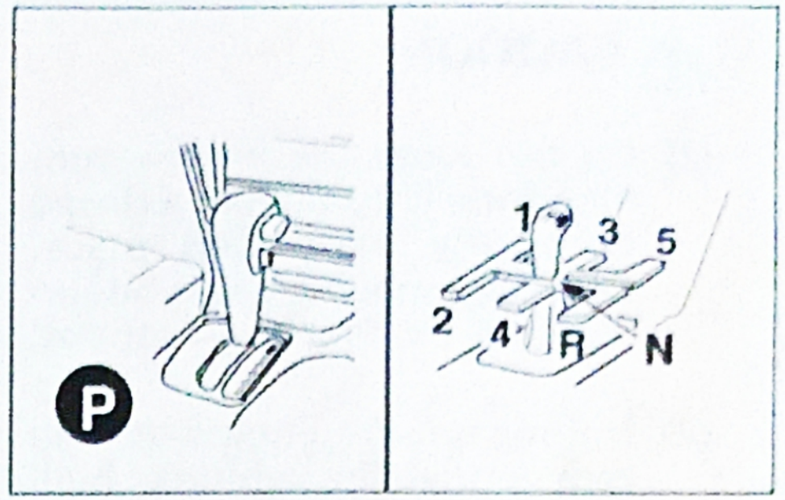
Remove the key at the "LOCK" position. Slightly turn the steering wheel until it is locked.

To unlock

Turn the key to the "ACC" position while moving the steering wheel slightly.

⚠ CAUTION

Remove the key when leaving the vehicle.



DOIAW004R1135

Starting

OWN006START006MC

Tips for starting

1. Do not operate the starter motor continuously for longer than 10 seconds; doing so could run down the battery. If the engine does not start, turn the ignition switch back to the "LOCK", wait a few seconds, and then try again.
2. If the engine cannot be started because the battery is weak or dead, refer to the "Emergency starting" section for instructions on starting the engine.
3. After starting the engine, do not keep the engine idling without driving. Only when atmospheric temperature is very low, warm up the engine at a high idling speed.

⚠ CAUTION

(1) Do not keep the engine running for a long time in a closed or poorly ventilated place. Carbon monoxide gas is odourless and extremely poisonous.

(2) Do not run the engine at high rpm or drive the vehicle at high speed until the engine has a chance to warm up.

(3) Release the ignition key as soon as the engine starts to avoid damaging the starter motor.

This vehicle is equipped with an electronically control injection and the fuel injected is automatically controlled. When starting the engine, do not depress the accelerator pedal.

1. Apply the parking brake.
2. **MANUAL** transmission vehicle; Press the clutch pedal to the floor and shift the shift lever into neutral. Hold the clutch pedal to the floor while starting the engine.

   AUTOMATIC transmission vehicle: Shift the selector lever to "P" or "N" position (preferably "P" position). If you restart the engine while the vehicle is moving, shift the selector lever into the "N" position. Do not attempt to place the lever of a moving vehicle into the "P" position.
3. Turn the ignition switch to the "ON" position and check the operation of the warning and indicator lights.
4. Turn the ignition switch to the "START" position without depressing the accelerator pedal. Release the key immediately after the engine has started.
5. Confirm that all warning and indicator lights have gone out after the engine has started. The fuel injection system automatically lowers the idling speed as the engine warms up. On automatic transmission vehicle, make sure that the lever is at the "P" or "N" position and that the parking brake is applied while warming up the engine.

Flooded engine

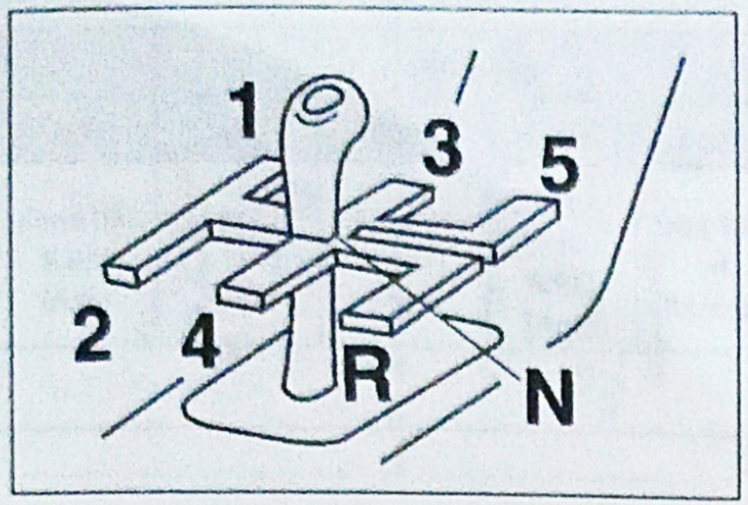
If the engine does not start, it may be flooded (excessive fuel in the engine). In case of a flooded engine, turn the starter motor for five seconds with accelerator pedal fully depressed. Repeat this two or tree times until the engine starts. Release the ignition and accelerator pedal as soon as the engine starts.

Stopping the engine

The engine switch should be turned off only when the engine is idling.

⚠ WARNING

Do not stop the engine when the vehicle is moving. this wil cause loss of power to the power steering and the brake booster, making steering and the braking more difficult. It will also result in accidental activation of the "LOCK" position on the ignition switch, causing the steering wheel to lock.



DOIAW006R3007

Manual transmission *

OWN006START007MC

The shift pattern is shown on the gearshift lever knob. Be sure to always fully depress the clutch pedal before attempting to shift the lever.

To shift into reverse from 5th gear, move the gearshift lever to the "N" position (neutral), and then shift it into reverse.

⚠ CAUTION

Do not move the gearshift lever into reverse while the vehicle is moving forward; doing so will damage the transmission.

Changing gears

Always use care to change the gear with the vehicle speed matched to the engine speed. Proper shifting will improve fuel economy and prolong engine life. Avoid shifting down at high speed, as this may cause excessive engine speed (on vehicles with a tachometer, the tachometer needle moved into the red zone) and damage the engine.

* if fitted

Economical driving speed

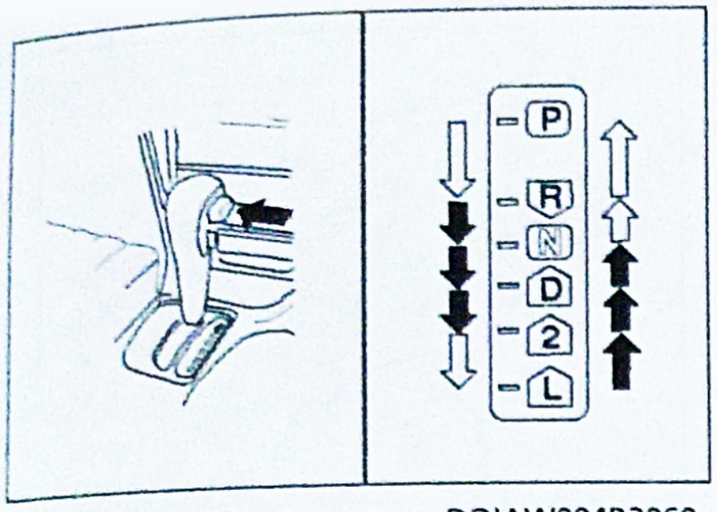
Drive range	Speed limit					
	1300	1500	1600	1800	1800 (1)	2000(2)
1st	25 km/h (15.5 mph)	25 km/h (15.5 mph)	35 km/h (21.7 mph)	30 km/h (18.6 mph)	40 km/h (24.8 mph)	20 km/h (12.4 mph)
2nd	45 km/h (27.9 mph)	45 km/h (27.9 mph)	55 km/h (34.1 mph)	55 km/h (34.1 mph)	65 km/h (40.3 mph)	40 km/h (24.8 mph)
3rd	70 km/h (43.4 mph)	70 km/h (43.4 mph)	90 km/h (55.9 mph)	85 km/h (52.8 mph)	95 km/h (59 mph)	60 km/h (37.2 mph)
4th	95 km/h (59 mph)	95 km/h (59 mph)	120 km/h (74.5 mph)	115 km/h (71.4 mph)	135 km/h (83.8 mph)	85 km/h (52.8 mph)

(1) Engine with double overhead camshaft
(2) Diesel- powered vehicle

Possible driving speed

Drive range		Speed limit				
	1300	1500	1600	1800	1800 (1)	2000(2)
1st	40 km/h (24.8 mph)	40 km/h (24.8 mph)	45 km/h (27.9 mph)	45 km/h (27.9 mph)	55 km/h (34.1 mph)	35 km/h (21.7 mph)
2nd	70 km/h (43.4 mph)	70 km/h (43.4 mph)	75 km/h (46.6 mph)	80 km/h (49.7 mph)	85 km/h (52.8 mph)	65 km/h (40.3 mph)
3rd	105 km/h (65.2 mph)	105 km/h (65.2 mph)	115 km/h (71.4 mph)	125 km/h (77.6 mph)	135 km/h (83.8 mph)	100 km/h (62.1 mph)
4th	145 km/h (90 mph)	145 km/h (90 mph)	160 km/h (99.4 mph)	170 km/h (105.6 mph)	180 km/h (111.8 mph)	140 km/h (86.9 mph)

(1) (DOHC)
(2) Diesel-powered vehicle



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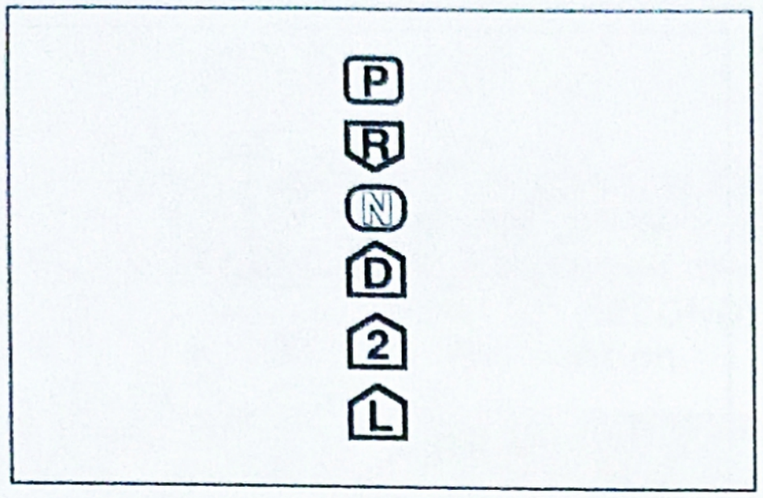


DOIAW004R3061

Automatic transmission *

OWN006START008MC

The transmission has 3 or 4 forward gears and one reverse gear.

The individual gears are selected automatically, depending on the position of the gear selector lever, the speed of the vehicle and position of the six positions, and is equipped with a lock button to avoid inadvertent selection of the wrong gear.

⇳ Button must be pressed to move the selector lever.

⇓ Button need not be pressed to move the selector lever.

The indicator lamps in the instrument panel are for indicating the selector lever position and one of them illuminated when the ignition is switched "ON".

Selector positions

P- PARK

This position locks the transmission to prevent the vehicle from moving. The engine can be started in this position.

⚠ WARNING

Never shift into the "P" (PARK) position while the vehicle is in motion. If the lever is shifted in to the "P" or "R" position while the vehicle is in motion, the transmission may be damaged.

R- REVERSE

Move the lever to this position only after the vehicle has come to a complete stop.

N - NEUTRAL

At this position the transmission is disengaged. It is the same as the neutral position on a manual transmission, and should be used when the vehicle is stationary for an extended length of time during driving, such as in a traffic jam.

⚠ WARNING

Never move the lever to the "N" position while the vehicle is being driven because engine braking becomes unavailable. On a slope the engine should be started in the "P (PARK) position, not in the "N" (NEUTRAL) position.

D- DRIVE

This position is used for most city and highway driving, for movement from a full stop to maximum speed.

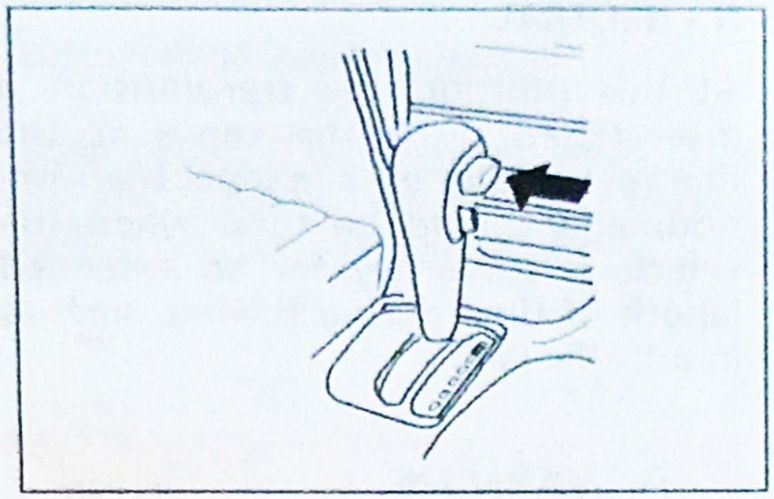
2 - SECOND

This position is for extra power when driving up moderately steep hills, and for engine braking when descending moderately steep grades.

L- LOW

This position is for driving up very steep hills and for engine braking at low speeds when descending steep grades.

* if fitted



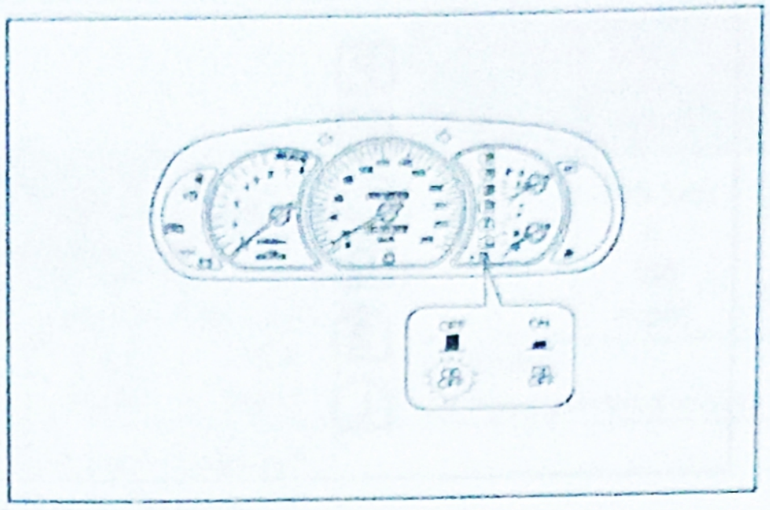
DOIAW004R1136

Overdrive control switch*

During ordinary driving, the overdrive switch should be left in the pressed-in position (the indicator lamp in the instrument panel is off).

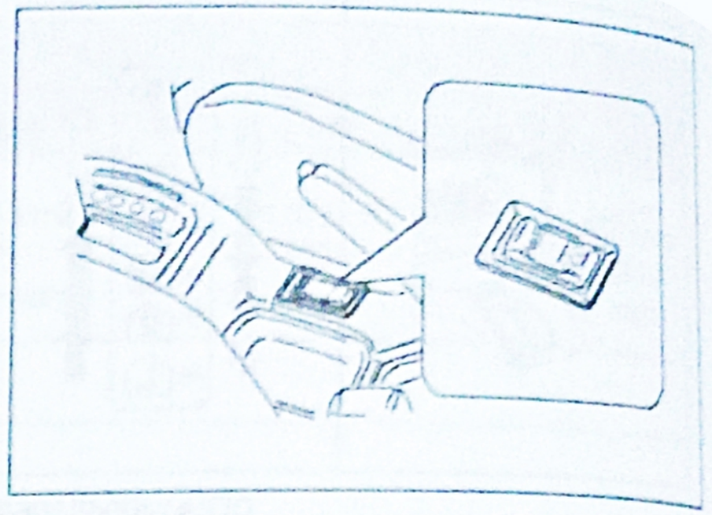
Automatic shifting will be performed in the rage from 1 st gear through 4 th gear if the selector lever is set at "D"

When you need quick acceleration or engine braking power on a downhill gradients, or when you are going to go up a long gradients, press the overdrive switch once again to cancel the overdrive function.



DOIAW004R1137

The indicator lamp in the instrument panel illuminates and automatic shifting will be performed in the range from 1st gear thourgh 3rd gear only.



DOIAW004R1138

POWER/ECONOMY mode changeover switch*

According to the road conditions, set the switch at "ECO (ECONOMY)" or "PWR (POWER)" for fuel economy, or for greater power for sporty driving.

ECO (ECONOMY)

Select this mode for normal driving. In this mode, your vehicle will run quietly and smoothly with good fuel economy.

PWR (POWER)

Select this mode when you require greater power.

Use this mode when you need more engine power, such as driving in mountainous areas, or to accelerate to pass other vehicles at high speed.

Operation

1. **Before selecting a gear with the engine running and the vehicle stationary, fully depress the brake pedal to prevent the vehicle from creeping.**
   The vehicle will begin to move as soon as the gear is engaged, especially when the engine speed is high, at fast idle or the air conditioning operating, the brakes should only be released when you are ready to drive away.
2. **Depress the brake pedal with the right foot at all times.** Using the left foot could cause driver movement delay in case of an emergency.
3. To prevent sudden acceleration, **never race the engine when shifting from the "P" or "N".**
4. Operating the accelerator pedal while the other foot is resting on the brake pedal will affect braking efficiency and may cause premature wear of brake pads.
   Do not race the engine with brake pedal pressed. This can damage the transmission.

Possible driving speed

In order to avoid damage to the engine for excessively high rpm, do not exceed the possible driving speed when the selector lever is set to the "2" (SECOND) position or the "L" (LOW) position.

Drive range	Speed limit		
	1500	1600	1800
"L" (LOW)	55 km/h (34.1 mph)	55 km/h (34.1 mph)	55 km/h (34.1 mph)
"2" (SECOND)	105 km/h (65.2 mph)	100 km/h (62.1 mph)	115 km/h (71.4 mph)
"D" (DRIVE)(1)	—	160 km/h (99.4 mph)	185 km/h (114.9 mph)
(1) With overdrive switched OFF.			

Passing acceleration

For quick acceleration when passing, depressing the accelerator pedal all the way to the floor will cause the transmission to automatically shift from 4th gear to 3rd gear, from 3rd gear to 2nd gear or from 2nd gear to 1 st gear, in accordance with the driving speed, without having to move the selector lever from either the "D" or "2" positions.

Waiting

For short waiting periods such as at traffic lights, the vehicle can be left in gear and held stationary with the service brake. For longer waiting periods with the engine running, the selector lever should be placed in the "N" position.

⚠ CAUTION

Never hold the vehicle stationary while in gear on a hill with the accelerator; always apply the parking brake and/or service brake.

Parking

To park the vehicle, first bring it to a complete stop, fully engage the parking brake, and then move the selector lever to the "P" position.

If you are going to leave the vehicle unattended, always switch off the engine and remove the ignition key.

When automatic transmission is locked in 3rd or 2nd gear (Vehicle with 4–gear automatic transmission)

If the transmission fails to shift during driving or the vehicle start only very slowly on hill, it is likely that the transmission is loked as described below.

1. The transmission is loked in 3rd gear with the selector lever in "D" position during driving.
2. The transmission is locked in 2nd gear with the selector lever in "2" or "L" position.

This locking is due to the safety device that protects the transmission against damage and allows the vehicle to continue to run in the event the transmission control system develops troubles.

If the transmission is locked, have your vehicle checked at your nearest authorised Proton dealer.

NOTE

(1) If the vehicle is hard to drive on hill due to the transmission being locked in 3rd gear, set the selector lever to "2". This locks the transmission in 2nd gear and it will be easier to drive. (The transmission may not be in 2nd depending on the nature of troubles.) Return the selector lever to the "D" position once the road surface again becomes horizontal.

(2) When the transmission is locked in 2nd gear, vehicle can be driven in 3rd gear by setting the selector lever to "D".

Parking

OWN006START012MC

Parking on a slope

Fully engage the parking brake, and then move the gearshift lever to 1st (on facing uphill), reverse (on facing downhill) position on manual transmission vehicle.

On automatic transmission vehicle, move to "P" position.

When parking on a hill, apply chocks to wheels for greater safety.

Parking with the engine running

Do not keep the engine running for a long time in a closed or poorly ventilated place. Carbon monoxide gas is odourless and extremely poisonous and dangerous.

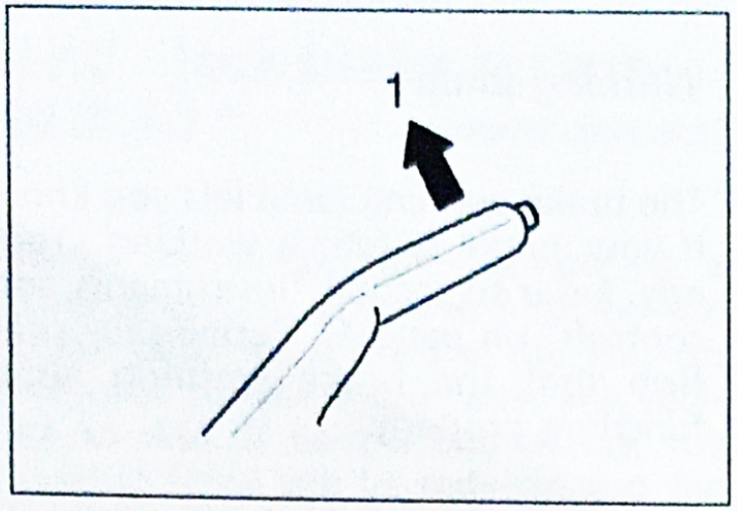
Where you park

Avoid parking in a place where there are inflammable objects such as dry grass, rags, etc. Because the exhaust system with catalyst produces very high temperatures.

When leaving the vehicle

Always remove the key from the ignition switch and lock all doors when leaving the vehicle unattended.

Always try to park your vehicle in a well lighted area.



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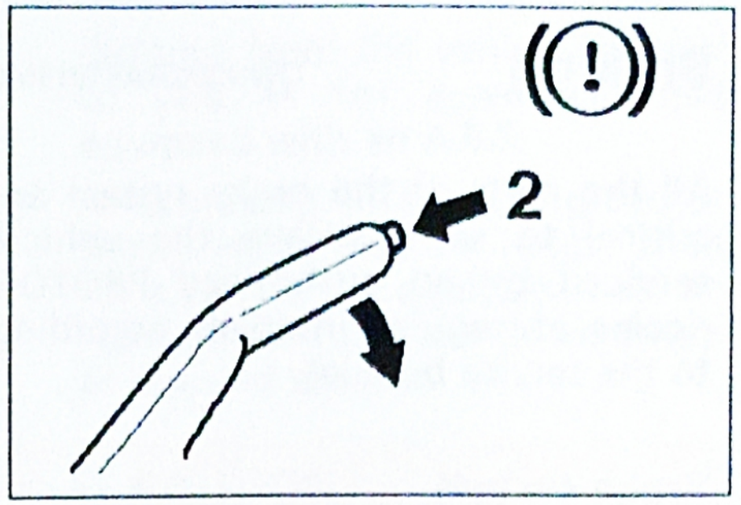


DOIAW004R3066

Parking brake OWN006START011MC

To park the vehicle, first bring it to a complete stop, fully engage the parking brake, and then move the gearshift lever to 1st (on facing uphill) or Reverse (on facing downhill) position. ("P" position on an automatic transmission)

1. To apply, pull the lever up without pushing the button at the end of hand grip.
2. To release, pull the lever up slightly, push the button at the end of hand grip, and then push downward.

When parking on a hill, apply the parking brake and turn the front wheels toward the kerb on a downhill grade; away from the kerb on an uphill grade.

⚠ CAUTION

Before driving, be sure that the parking brake is fully released and brake warning lamp is off.

If a vehicle is driven without releasing the parking brake, the brake will be overheated, resulting in ineffective braking and possible brake failure.

Braking

OWN006START013MC

All the parts of the brake system are critical to safety. Have the vehicle serviced by an authorised PROTON dealer at regular intervals according to the service booklet.

Brake system

1. The service brake is divided into two brake circuits so that if one brake circuit fails, the other is available to stop the vehicle. If this occurs, however, the brake pedal must be depressed further than usual; stop driving as soon as possible and have the brake system repaired at the nearest authorised PROTON dealer.
2. The brake boosting force is lost after the brake pedal is depressed once or twice while the engine is off. If this occurs, the brake will require greater force than usual. This is especially important when the vehicle is being towed.

Warning lamp

The brake warning lamp lets you know if your brake system is working properly. Refer to section "Instruments and controls" on page 41. Periodically confirm that the brake warning lamp functions properly.

⚠ WARNING

For vehicle equipped with ABS system, the brake force distribution on each tyre is electronically control to avoid skidding when hard braking is applied. If malfunction occurs, the brake warning lamp will illuminates. In this situation, drive slowly to an authorised Proton dealer immediately and prevent from hard braking to avoid skidding. Have your car inspected by an authorised Proton dealer.

When brakes are wet

Check the brake system while driving at a low speed immediately after starting, especially when the brakes are wet, to confirm they work normally.

A film of water can form on the brake discs and prevent normal functioning after driving in heavy rain or through large puddles, or after the vehicle is washed. If this occurs, repeatedly tap the brake pedal lightly while driving to dry out the brakes.

When driving downhill

It is important to take advantage of the engine braking by shifting to a lower gear while driving on steep downhill roads in order to prevent the brakes from overheating.

Brake pads and linings

1. With new brake pads or linings, avoid where possible, sudden full application of the brakes for the first 200 km (124.2 mile) of driving.
2. The disc brakes are provided with a warning device which emits a shrieking metallic sound while braking if the brake pads have reached their limit. If you hear this sound, have the brake pads replaced by your PROTON dealer.

⚠ CAUTION

(1) Do not leave any objects or place a thick floor mat around the brake pedal; doing so could prevent the full pedal stroke that would be necessary in an emergency. Make sure that the pedal can be operated freely at all times.

(2) Avoid driving habits that may lead to sudden braking and never "ride" the brakes by resting your left foot on the brake pedal while driving.

It causes brake overheating and fade.

Anti - lock brake system (A.B.S.) *

OWN006START014MC

When the brakes are applied on a moving vehicle, excessive force on the brake pedal or snow, ice, oil, etc., on the road surface could cause the vehicle to skid. If such a skid occurs, the braking force will be reduced and the braking distance increased, and the vehicle could turn sideways and go into a spin with the driver losing control.

The A.B.S. prevents the wheels from locking during braking, thus maintaining directional stability, ensuring control is maintained, and providing optimum braking force.

Driving hints

1. With A.B.S. fitted, steering during sudden braking (when the A.B.S. functions) differs slightly from when the brakes are not being applied.

   Steer the vehicle carefully in these conditions.

2. The braking distance for vehicles equipped with an A.B.S. is generally shorter than for those without. Because this difference will vary according to the road condition and other factors, maintain a safe distance from the vehicle in front of you as for a vehicle not equipped with an A.B.S.
3. Also, braking distances on gravel or snowy roads may be longer than for a vehicle not equipped with an A.B.S., these roads should be driven at reduced speeds.

⚠ CAUTION

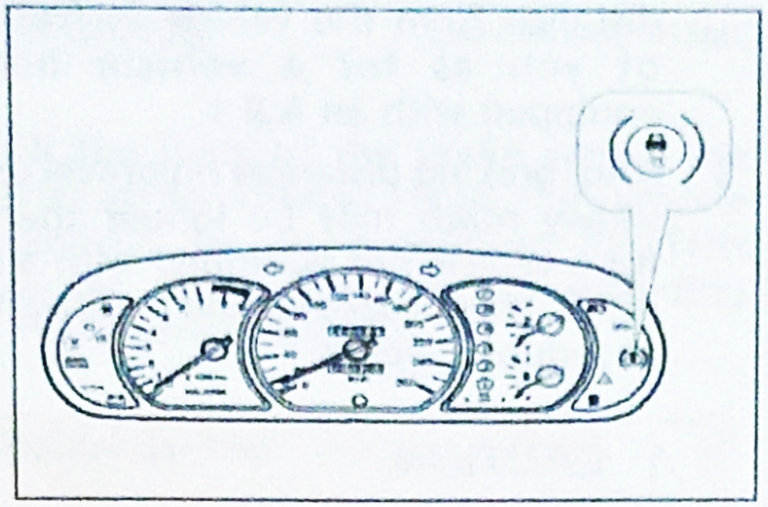
(1) Even the A.B.S. can not prevent the natural laws of physics from acting on the vehicle. It cannot for instance avoid accidents that maybe resulting from excessive speed in turn, following another vehicle too closely or aquaplaning. It should remain the driver's task with safety precautions to judge speeds and brake applications correctly in such conditions.

(2) Be sure to use the tyres of the same type and size on four wheels.

If a different tyre is mixed, A.B.S. may not function normally.

(3) Never replace the differential with a limited slip differential. A.B.S. may not function normally.

* if fitted



DOIAW004R1114

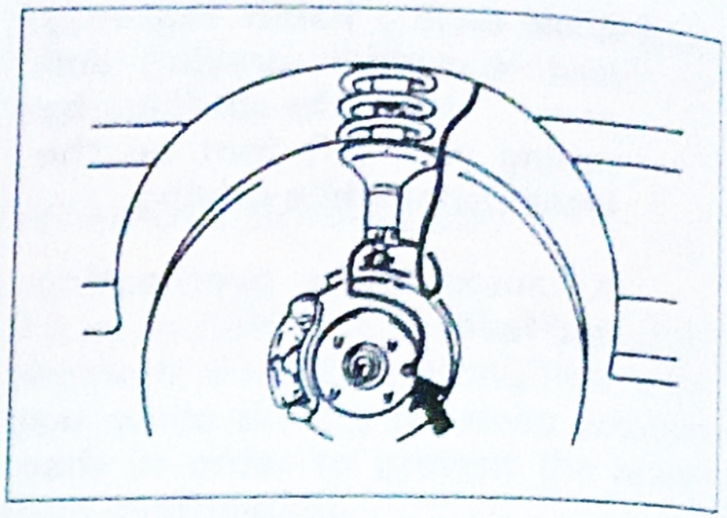
Warning lamp

The A.B.S. warning lamp should illuminate when the ignition switch is turned "ON", and should go off in approx. 3 seconds.

If the warning lamp stays ON, it indicates that the A.B.S. is not functioning and that only the standard brake system is in operation. (In this condition the standard brake system will still function normally).

If the lamp illuminates while driving

1. Stop the vehicle in a safe place and turn off the engine. Restart the engine and check to see whether the lamp goes out; if it then remains off during driving, there is no problem.
   However, if the lamp does not go out, or if it lights up again when the vehicle is driven, have the vehicle checked by an authorised PROTON dealer as soon as possible.
2. After starting the engine using jumper cables, if you attempt to start the vehicle before the battery is sufficiently charged, the engine will run irregularly and the A.B.S. warning lamp will blink indicating that the vehicle should not be driven.
   This situation, however, is caused merely by insufficient battery voltage and is not an abnormal situation. If such a situation occurs, run the engine at idle for some time to charge the battery.



DOIAW004R1115

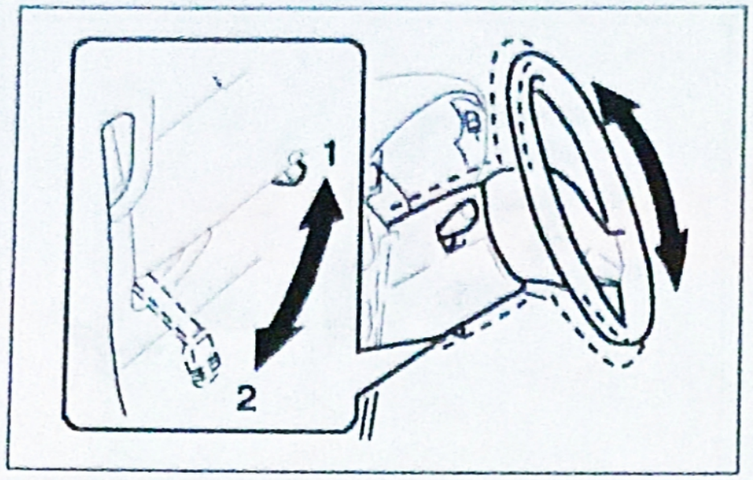
NOTE

(1) Although some vibration will be felt in the vehicle body, the steering wheel, and the brake pedal when the A.B.S. functions, this is a normal results of the A.B.S. operation, and does not indicate a malfunction.

(2) Just after the engine is started or when vehicle starts running, a whinning sound and the sound of a motor operation will be heard from the engine compartment. These are the sounds of the A.B.S. performing a self-check, and does not indicate a malfunction.

(3) After driving on dusty, muddy roads, remove any dust or mud which may have become adhered to the wheel areas. When doing this, be careful not to damage the

wheel speed sensors and cables located at each wheel on vehicles equipped with an A.B.S.



DOIAW004R3069

Steering wheel height adjustment OWN006START015MC

Release the lever and adjust the steering wheel to the desired height for optimum driving comfort.

1 - Fix
2 - Release

⚠ WARNING

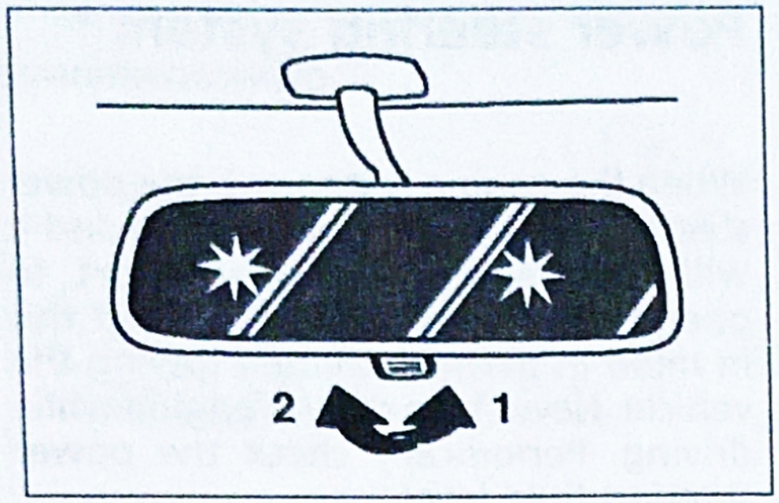
(1) After adjusting to the desired height, check to be sure that the lever is secured.

(2) Do not attempt to adjust the steering wheel while you are driving the vehicle.

Power steering system * OWN006START016MC

When the engine is stopped, the power steering system will not function and it will require more manual effort to operate the steering wheel. Keep this in mind in particular when towing the vehicle. Never turn off the engine while driving. Periodically check the power steering fluid level.

* if fitted



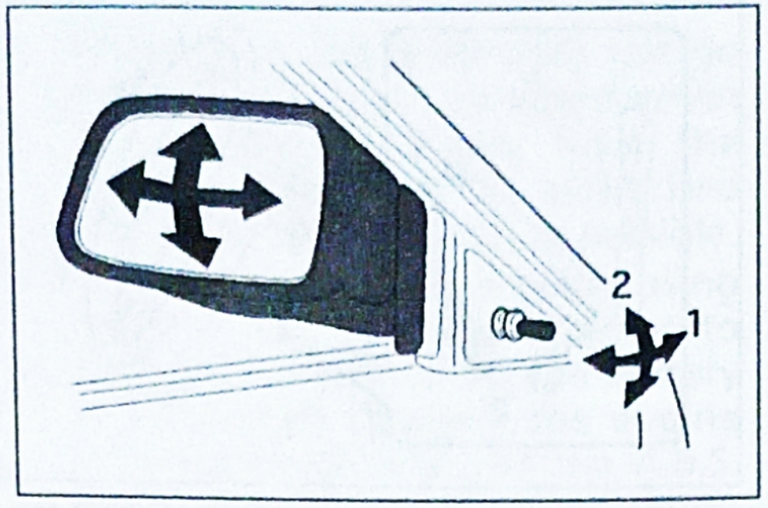
DOIAW004R3070

Inside rear-view mirror

OWN006START017MC

The lever at the bottom of the mirror can be used to adjust the mirror to reduce the glare from the headlights of vehicles behind you during night driving.

1 - Normal
2 - Anti-glare



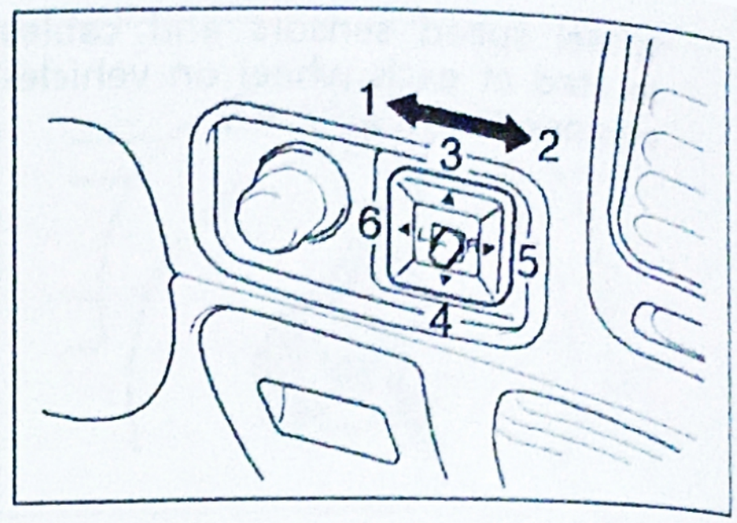
DOIAW004R1139

Outside rear-view mirrors *

OWN006START018MC

Adjust the mirrors as desired by operating the lever as indicated by the arrows.

1 - Left and right
2 - Up and down



DOIAW004R1116

Electric remote-controlled outside rear-view mirrors

OWN006START019MC

The outside rear-view mirrors can be operated when the ignition switch is in the "LOCK" or "ON" or "ACC" position.

Place the lever to the same side as the mirror whose adjustment is desired.

1 - Left outside mirror adjustment
2 - Right outside mirror adjustment

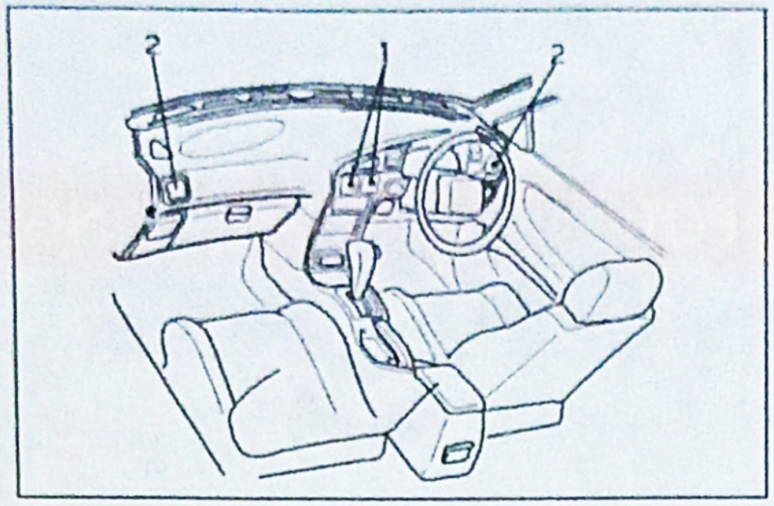
Press the left, right, up, or down switches to adjust the mirrors

3 - Up
4 - Down
5 - Right
6 - Left

* if fitted

FOR PLEASANT DRIVING

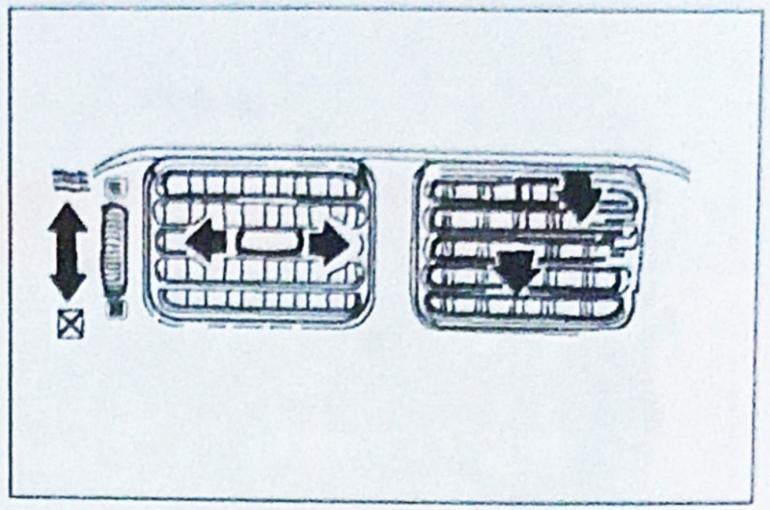
Ventilators	72
Ventilator control	72
Air conditioning	73
Sun visors	76
Vanity mirror	76
Cigarette lighter	77
Ashtray	78
Digital clock	78
Accessory boxes	79
Cup tray	80
Rear shelf panel*	80



DOIAW005R3001

Ventilators OWN007PDRIV001MC

1. Centre ventilators
2. Side ventilators



DOIAW005R3002

Air flow and direction adjustments

≋ – Open

⊠ – Close

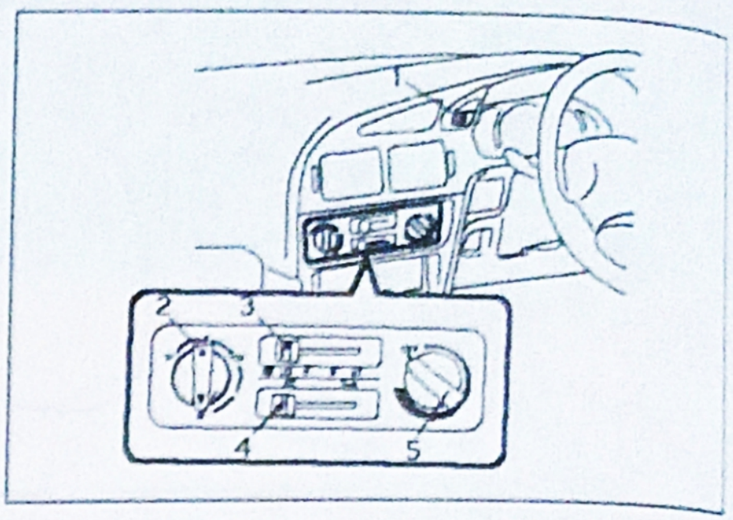
Set the ventilator dial to open position.

Air always flows out from the ventilator when the fan is switched on.

Adjust the direction of the air flow by moving the knob, and horizontal adjustment can be made. Vertical adjustment can be made by pushing the upper side or the lower side of the ventilator.

NOTE

On an air condition-equipped vehicle, the cool air from the ventalators might appear to be a mist flowing out. This is due to suddenly cooled moist air and is not a sign of trouble.



DOIAW005R3003

Ventilator control

OWN007PDRIV050MC

The ventilator control can be operated when the key is at the "ON" position.

Operation of controls

1 - Fan switch

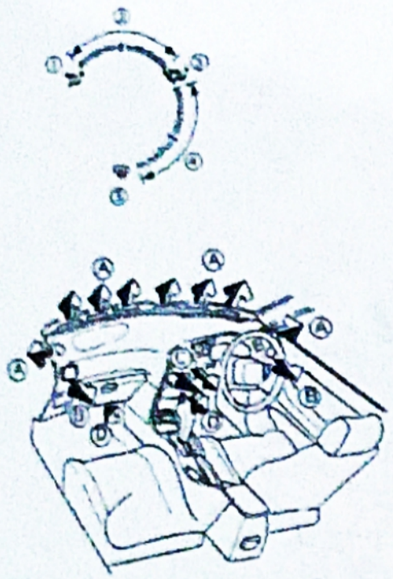
A breeze is provided when the switch is pressed; the breeze stops when it is pressed once again.

2 - Mode selection knob

Set the mode selection knob to the desired position.

3 - Fan speed control switch

There are four fan speeds for control of the amount of air flow.



DOIAW005R0028

MODE SELECTION	AIR OUTLETS
1	B(1) C(2)
2	B(1), C(2)
3	A(3),B(1),C(2),D(4)
4	A(3),B(1),C(2),D(4)
5	A(3),B(1),C(2),

(1) From side ventilators
(2) From centre ventilators
(3) From front and side defroster
(4) From under the instrument panel

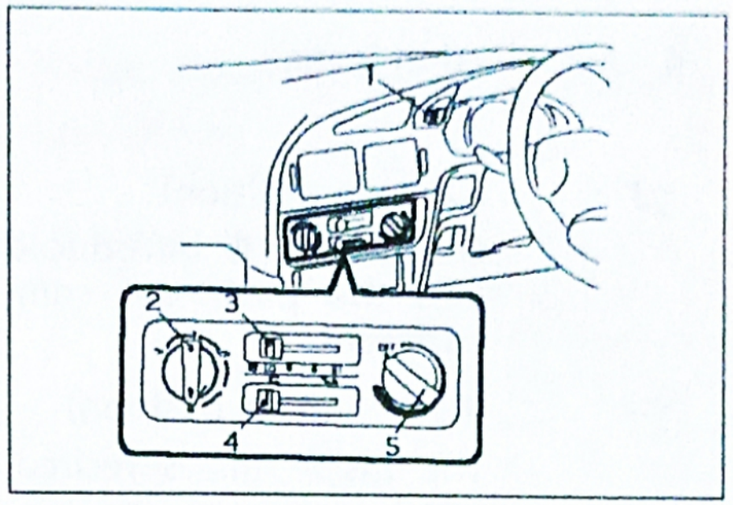
4 - Air selection lever.

(Outside position)
Outside air is introduced into the passenger compartment.

(Recirculation position)
The inside air is recirculated.

NOTE

During rainy or cold weather the recirculation position should only be used for a short time in oder to prevent the unecessary formation of mist on windows.



DOIAW005R3003

Air conditioning

OWN007PDRIV002MC

The air conditioning can be operated while the engine is running.

Operation of controls

Operation of controls

1 - Fan switch

A breeze is provided when the switch is pressed; the breeze stops when it is pressed once again.

2 - Mode selection knob

Set the mode selection knob to the desired position.

3 - Fan speed control switch

There are four fan speeds for control of the amount of air flow.

4 - Air selection lever.

(Outside position)

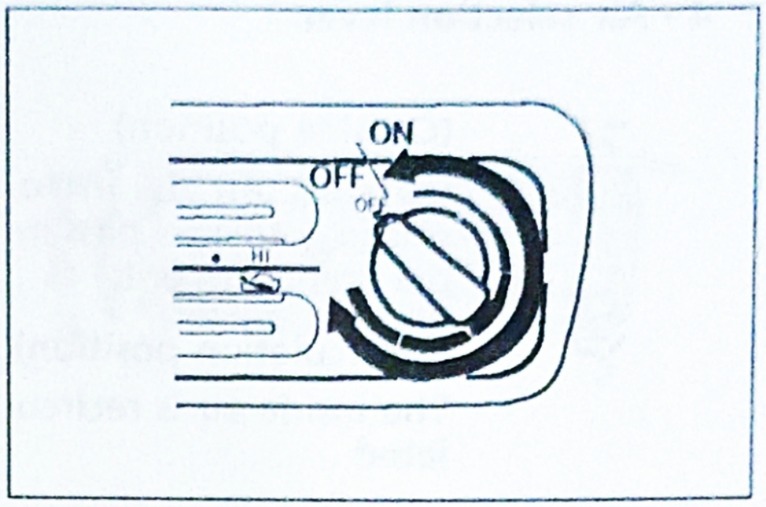
Outside air is introduced into the passenger compartment.

(Recirculation position)

The inside air is recirculated.

NOTE

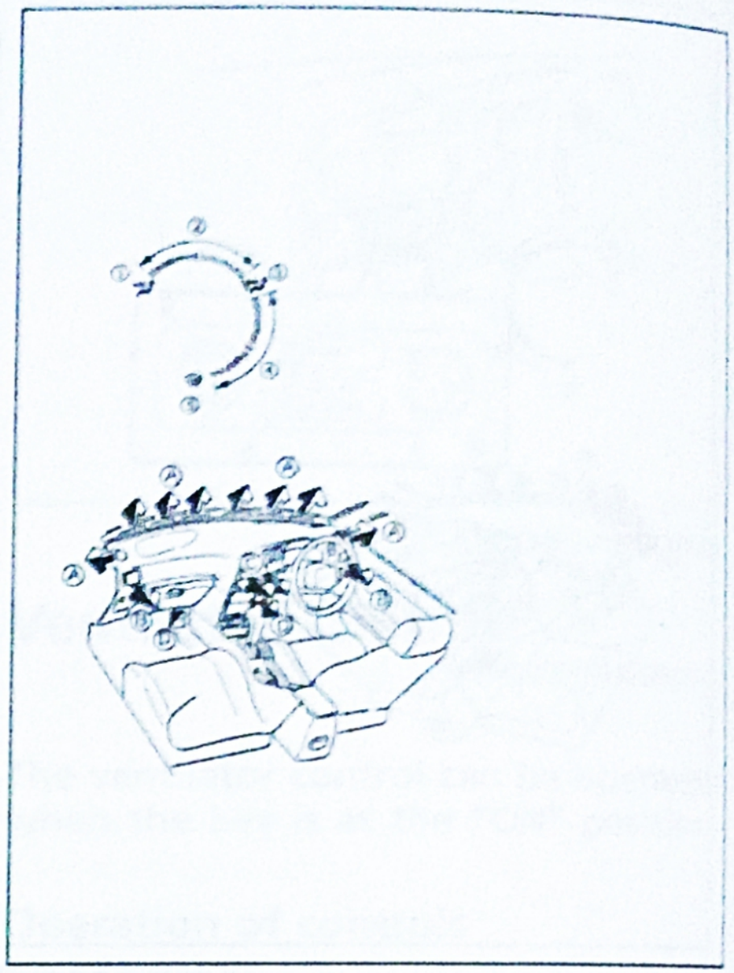
During rainy or cold weather the recirculation position should only be used for a short time in oder to prevent the unecessary formation of mist on windows.



DOIAW005R3007

5 - Air condition control knob

The air compressor is switched ON when this knob is turned futher clockwise, the air flow temperature will gradually decrease



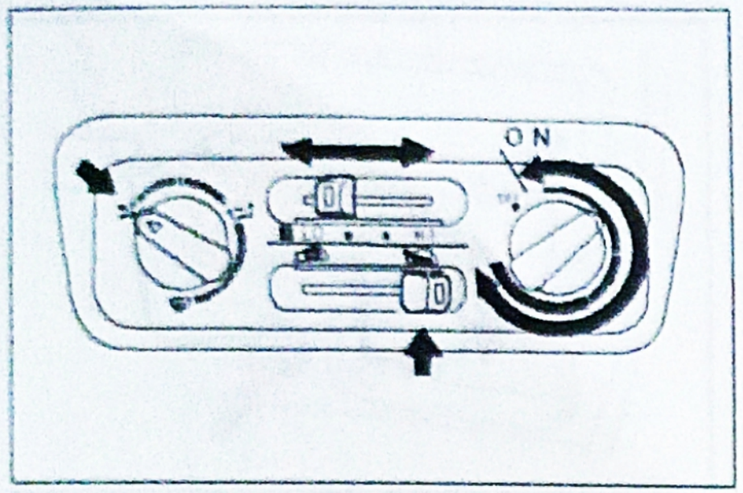
DOIAW005R0028

A: From front and side defroster

B: From side ventilators

C: From centre ventilators

D: From under the instrument panel



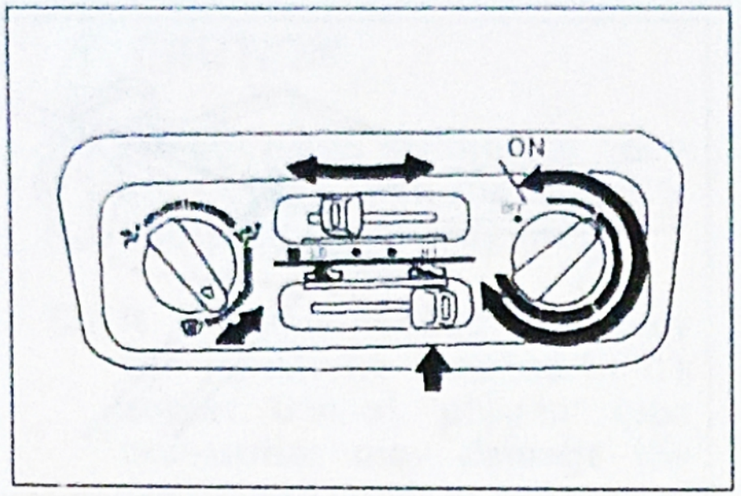
DOIAW005R9010

Cooling

Set the mode selection knob and air selection lever to the positions shown in the illustration and turn on the air condition. Adjust the temperature by turning the temperature control knob clockwise or anticlockwise. Select the desired fan speed.

NOTE

If the outside air is dusty or otherwise contaminated, or if increased cooling performance is desired, set air selection lever to the recirculation position and turn the air conditioning switch knob all the way to clockwise.



DOIAW005R9011

Dehumidifying

Set the air conditioning switch knob to the ON position and set the air selector lever to the position shown in the illustration.

Set the mode selection knob to control the air flow direction.

Adjust the temperature by turning the air conditioning switch knob clockwise or anticlockwise. Select the desired fan speed.

Notes, concerning air conditioning operation

1 - Park the vehicle in the shade. Parking under the hot sun will make the vehicle interior extremely hot, and it will require more time to cool the interior. If it is necessary to park in the sun, open the windows for the first few minutes of air conditioning operation to expel the hot air.
2 - Close the windows when the air conditioning is in use. The entry of outside air through open windows will reduce the cooling efficiency.
3 - If the air conditioning seems less effective than usual, the probable cause might be a refrigerant leak. Have the system checked by an authorised Proton dealer and recharge the refrigerant if necessary.

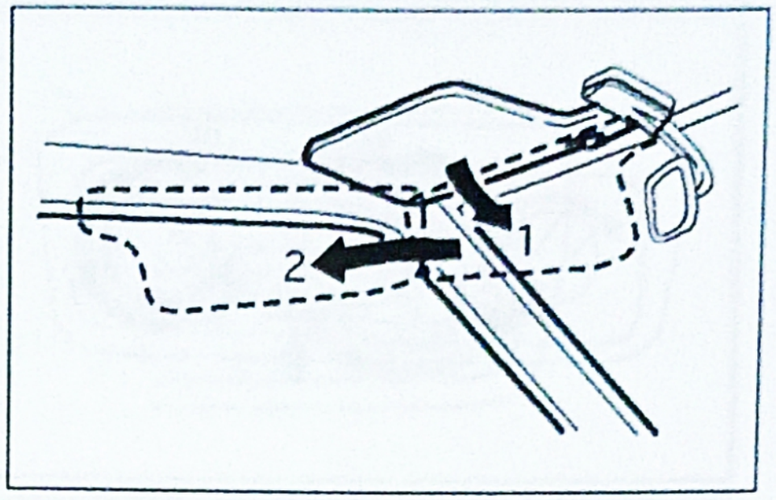
Operation hints

The air conditioning not only cools the air, but also dehumidifies it, thus offering greater comfort.

Too much cooling is not good for the health. The air temperature should only be 5 to 6 deg.C (9 to11deg.F) lower than the outside air.

During a long period of disuse

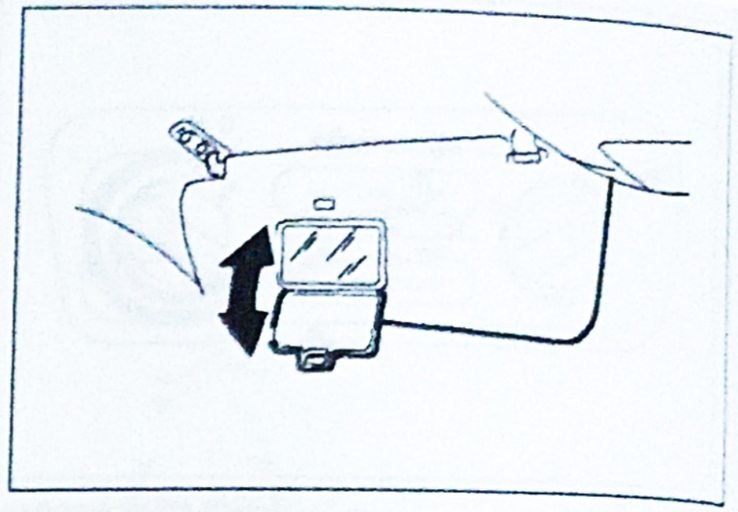
The air conditioning should be operated for at least five minutes each week, even in cold weather. This is to prevent poor lubrication of the compressor internal parts and maintain the air conditioning in the best operating condition.



DOIAW005R3060

Sun visors OWN007PDRIV004MC

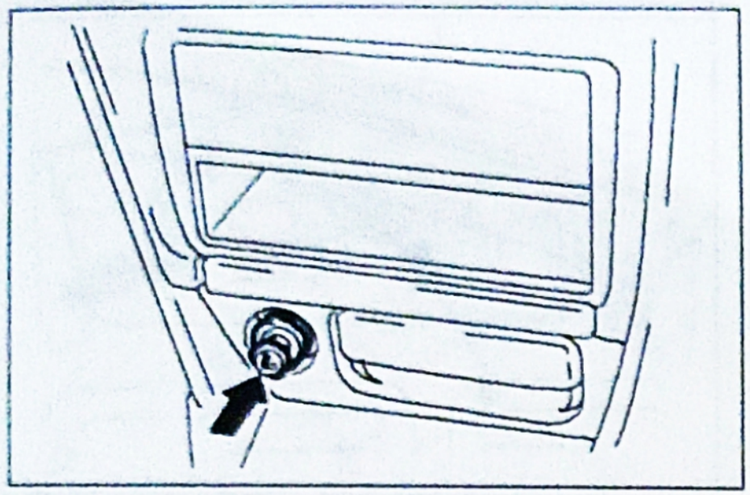
1 - To eliminate front glare
2 - To eliminate side glare



DOIAW005R3011

Vanity mirror OWN007PDRIV005MC

A vanity mirror is fitted to the rear of the sun visor on the passenger side.



DOIAW005R9012

Cigarette lighter

OWN007PDRIV006MC

The cigarette ligter can be used while the ignition switch is in either the "ON" or "ACC".

1 - Push all the way in.

The lighter will automatically return to its original position with a "click" when ready. Pull it out for use.

⚠ CAUTION

(1) Do not allow children to operate or play with the cigarette lighter as burns may occur.

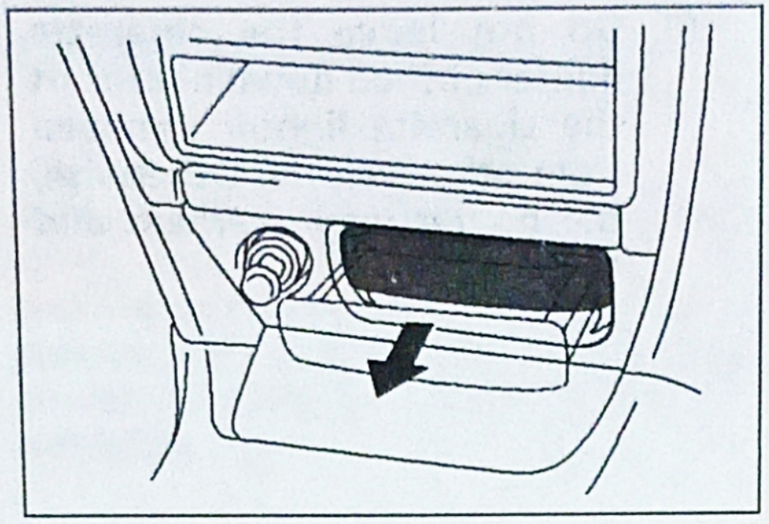
(2) It is recommended that only the lighter be inserted in it's socket. Use of "plug-in" type accessories may damage the socket and result in poor retention of the lighter.

(3) When the cigrette lighter socket is used as a power source for the electric appliance operates at 12V and has an electric capacity of 120W or less. In addition, long use of the electric appliance without running the engine may run down the battery.

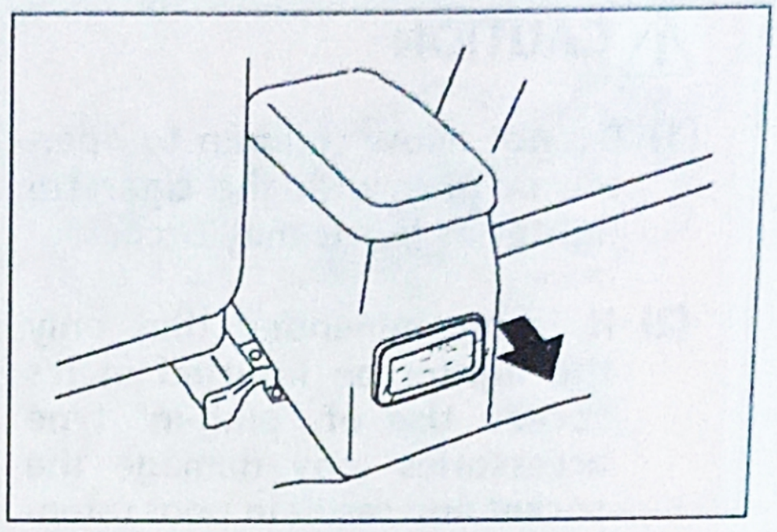
(4) Do not touch heating element or lighter housing, hold at the knob only.

(5) Something is wrong with the cigarette lighter if it does not pop back out within approximately 30 seconds of being pushed in. Leaving the cigarette lighter pushed in for an extended period could cause a fire. If it does not pop out by itself, pull it out and have the problem corrected at an authorised PROTON dealer.

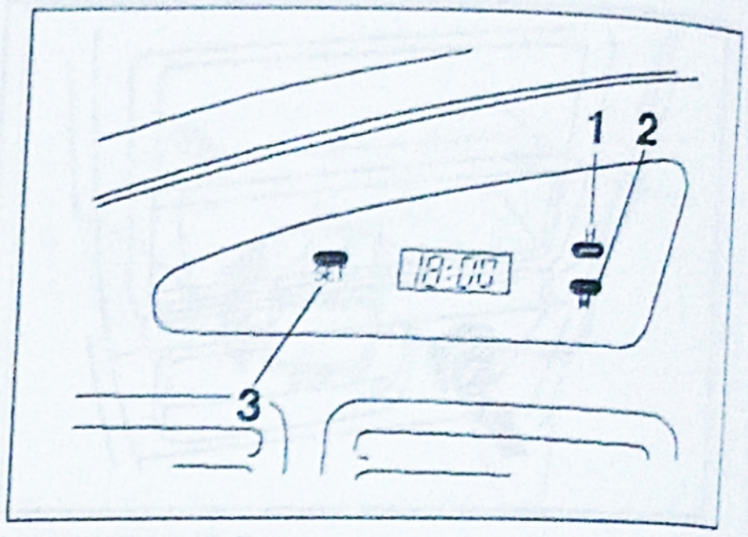
(6) Do not leave the cigarette lighter pushed down nor insert the cigarette lighter removed from other vehicle. Otherwise, the lighter may overheat and cause a fire.



DOIAW005R1140



DOIAW005R1198



DOIAW005R9013

Ashtray

OWN007INSCO007MC

Front ashtray

Pull out the front ashtray to open. To remove the ashtray, pull it out while pressing the stubber.

⚠ CAUTION

Don't put papers and other things that burn into your ashtrays. If you do, cigarettes or other smoking materials could set them on fire, causing damage.

Rear ashtray

Pull the ashtray downward to open. To remove the ashtray, pull it out while pressing the stubber.

Digital clock

OWN007PDRIV008MC

The digital clock indicates the time with the ignition switch in either the "ON" or "ACC" position.

Set the time by pressing the various buttons as described below.

To set the time

1. To adjust the hour
2. To adjust the minutes
3. To reset the minutes to zero

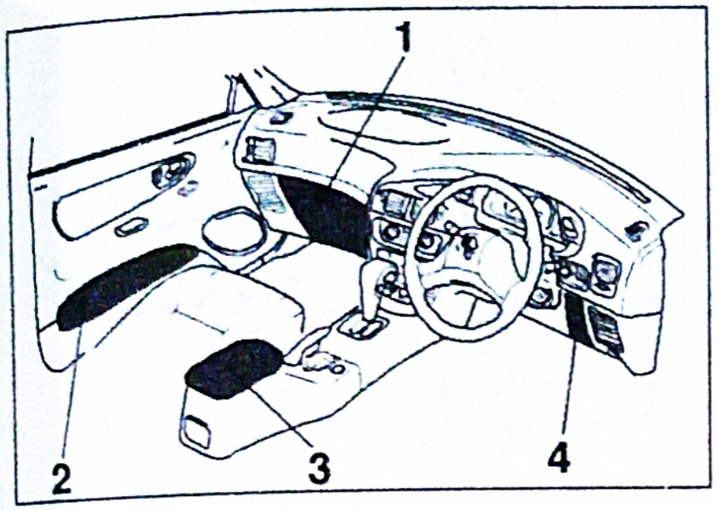
Example

10:30 — 11:29 Changes to 11:00

11:30 — 12:29 Changes to 12:00

NOTE

If the battery cables are disconnected, reset the clock to the correct time after they are reconnected.



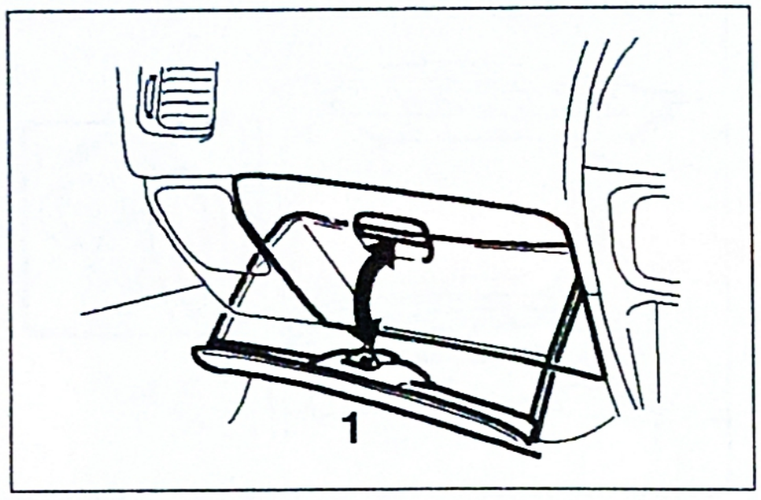
DOIAW005R9914

Accessory boxes

OWN007PDRIV009MC

Various small articles can be kept in here.

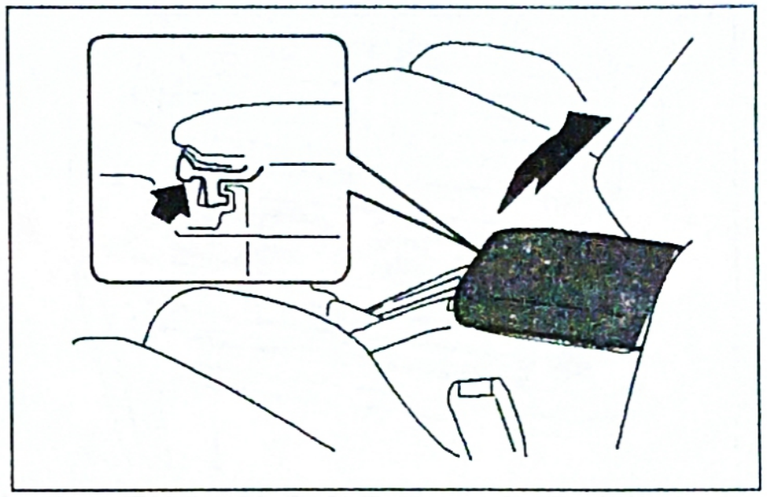
1 - Glove box
2 - Door pocket
3 - Centre accessory box
4 - Parcel box



DOIAW005R9015

Glove box

1. To open, pull the lever.

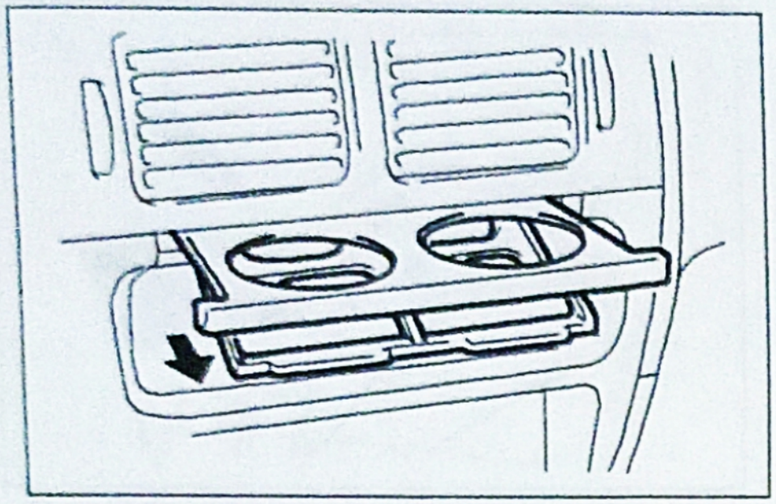


DOIAW005R3067

Center accessory box *

To open the box, lift the release lever and raise the lid.

* if fitted

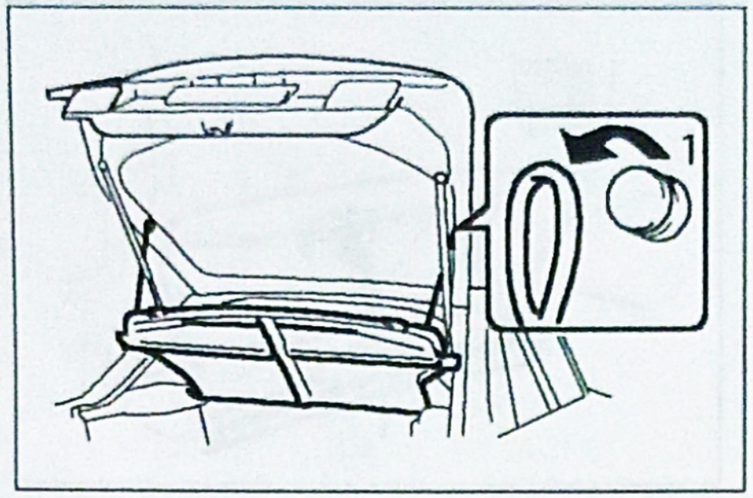


DOIAW005R3068

Cup tray

OWN007PDRIV010MC

Draw out the tray to use. When the tray is not in use keep it retracted.



DOIAW005R3069

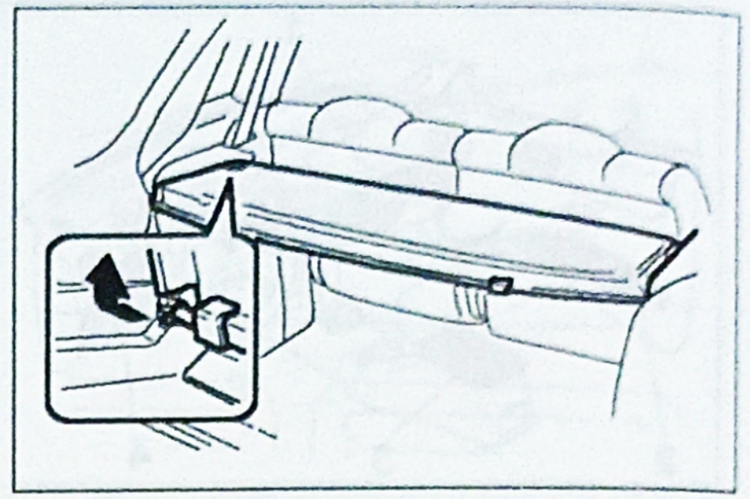
Rear shelf panel*

OWN007PDRIV012MC

Open the tailgate, and the shelf panel will be lifted together with the tailgate.

To remove

1. Unhook the cords from the tailgate.



DOIAW005R3070

2. Unsnap by lifting the shelf panel pivoting points.

VEHICLE CARE

General Guideline	82
Cleaning the inside of your vehicle	82
Cleaning the out side of your vehicle	83

General Guideline

OWN008VCARE001MC

In order to maintain the value of your vehicle, it is necessary to perform regular maintenance using the proper procedures. Be sure to maintain your vehicle in compliance with any pertinent environmental pollution control regulations. Carefully select the materials to be used for washing, etc., to be sure that they do not contain corrosives; if in doubt, contact an authorized PROTON dealer for assistance in the selection of these materials.

⚠ CAUTION

Cleaning products can be dangerous. Some are poisonous. Other can burst into flame if you strike a match or get them on a hot part of the vehicle. Some are dangerous if you breathe their fumes in a closed space. When you use anything in a container to clear your vehicle, be sure to follow the instructions. And always open your vehicle doors or windows when you're cleaning the inside. Never use these to clear your vehicle.

- **Gasoline**
- **Benzine**
- **Naphtha**
- **Carbon tetrachloride**
- **Nail Polish**
- **Acetone**
- **Paint thinner**
- **Turpentine**
- **Lacquer thinner**

These can all be dangerous, and they all can damage your vehicle.

Cleaning the inside of your vehicle

OWN008VCARE002MC

After cleaning the inside of your vehicle with water, cleaner or similar, wipe and dry in the shady, well-ventilated area.

NOTE

Always read the instructions on the cleaner label.

Plastic, vinyl leather, fabric and flocked parts

1. Lightly wipe off with gauze or other soft cloth soaked with a aqueous solution of neutral detergent.
2. Dip cloth in fresh water and wring out well. Using this cloth, wipe off the detergent thoroughly.

Upholstery

1. To maintain the value of your new vehicle, handle the upholstery carefully and keep the interior clean.

   Use a vacuum cleaner and brush to clean the seats. If stained, vinyl and synthetic leather should be cleaned with an appropriate cleaner, and cloth fabrics can be cleaned with

either upholstery cleaner or a 3% solution of neutral detergent in lukewarm water.

2. Clean the carpeting with a vacuum cleaner and remove any stains with carpet cleaner. Oil and grease can be removed by lightly dabbing with a clean colorfast cloth and spot remover.

Cleaning the out side of your vehicle OWN008VCARE003MC

1. To preserve the beauty of your vehicle, use a feather duster or the like to remove dust from the painted surface.
2. Since the following soiling left on your vehicle may cause corrosion, discoloration and stains, wash the vehicle as soon as possible.

Since the following soiling left on your vehicle may cause corrosion, discoloration and stains, wash the vehicle as soon as possible.

- Seawater, anti-freeze for road use.
- Soot and dust, iron powder from factories, chemical substance (acids, alkalis, coal-tar, etc.)
- Droppings from birds, carcasses of insects, tree sap, etc.

Washing

Chemicals contained in the dirt and dust picked up from the road surface can damage the paint coat and body of your vehicle if left in prolonged contact.

Frequent washing and waxing is the best way to protect your vehicle from this damage. This will also be effective in protecting it from environmental elements such as rain, snow, salt air, etc. Do not wash the vehicle in direct sunlight.Park the vehicle in the shade and spray it with water to remove of clean water and a car washing brush or sponge, wash the vehicle from top to bottom.

Use a mild car washing soap if necessary. Rinse thoroughly and wipe dry with a soft cloth. After washing the vehicle, carefully clean the joints and flanges of the doors, hood, etc., where dirt is likely to remain.

⚠ CAUTION

(1) When washing the under side of your vehicle, wear a pair of rubber gloves in order to protect your hands.

(2) Try to refrain from using a car wash as its brushes may scratch the paint surface, causing it to lose its gloss. Scratches will be especially visible on darker coloured vehicles.

(3) Never spray or splash water on the electrical components in the engine compartment, as this may adversely affect the starting circuit.

(4) Some types of hot water washing equipment apply high pressure and heat to the vehicle. They may cause heat distortion and damage to the vehicle resin parts and may result in flooding of the vehicle interior. Therefore, be sure to observe the following; maintain a good distance of approx. 40 cm (15.7 in) or more between the vehicle body and the washing nozzle. When washing around the door glass, hold the nozzle at a distance of more than 50 cm (19.6 in) and at right angles to the glass surface.

(5) Before washing a vehicle equipped with a rear spoiler in an automatic car wash, consult a car wash attendant about possible damage. Ask if their type of car wash will catch the rear spoiler and thereby damage your vehicle.

Waxing

Waxing the vehicle will help prevent the adherence of dust and road chemicals to the paintwork. Apply a wax solution after washing the vehicle, or at least once every three months to assist displacing of water. Do not wax your vehicle in direct sunlight. You should wax after the surfaces have cooled.

⚠ CAUTION

(1) Waxes containing high abrasive compounds should not be used. Such waxes remove rust and stain effectively from the paintwork but they are harmful to the luster of the painted surface. Further, they are detrimental to glossy surfaces such as grille, etc.

(2) Do not use petrol or paint thinners to remove road tar or other contamination to the painted surface.

(3) Do not apply wax on the areas having black mat coating as it can cause uneven discoloration, patches, blurs, etc. If stained with wax, immediately wipe off with a piece of soft cloth and warm water.

(4) Be careful when waxing the area around the sunroof opening, not to put any wax on the weatherstrip (black rubber). If stained with wax, the weatherstrip cannot maintain a weatherproof seal with the sunroof.

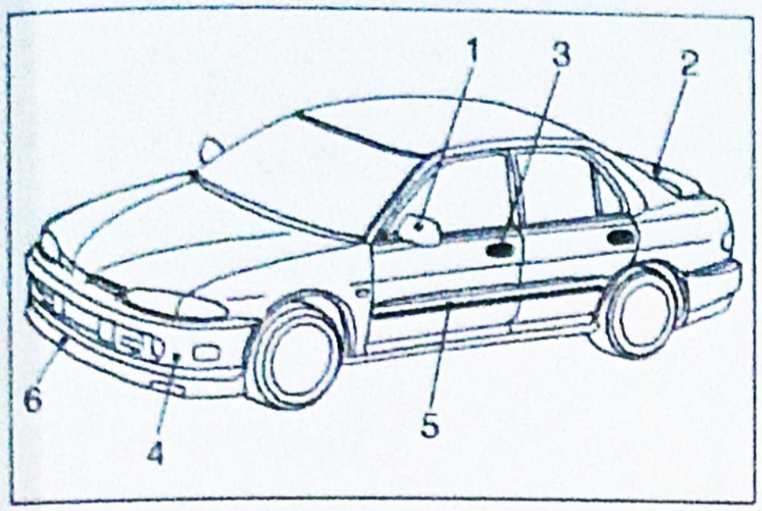
Polishing

The vehicle should only be polished if the paintwork has become stained or lost its lustre. Mat-finish parts and plastic bumpers must not be polished; polishing these parts will stain them or damage their finish.

Damaged paint

Small cracks and scratches in the paint coat should be touched up as soon as possible with PROTON touch-up paint to prevent corrosion.

Check body areas facing the road or the tyres especially carefully for damage to the paint coat caused by flying stones, etc. The paint code number for your vehicle can be found on the vehicle information code plate in the engine compartment.



DOIAW006R9005

Servicing of plastic parts

1 - Door mirrors
2 - Rear spoiler *
3 - Door handles
4 - Bumpers
5 - Door mouldings
6 - Front skirt *

Use a sponge or chamois leather. If a car wax adheres on a gray or black rough surface of the bumper or moulding, the surface becomes whity. In such a case, wipe it off using lukewarm water and soft cloth or chamois leather.

⚠ CAUTION

(1) Do not use a scrubbing brush or other hard tools as they may damage the plastic part surface.

(2) Do not use wax containing compound (polishing powder) which may damage the plastic part surface.

(3) Do not bring the plastic parts into contact with brake fluids, engine oils, greases, thinner for painting, and sulfuric acid (battery electrolyte) which may stain, or discolour the plastic parts. If they touch the plastic part, wipe them up with soft cloth, chamois or the like and an aqueous solution of neutral detergent, then immediately rinse the affected parts with water.

Chrome parts

In order to prevent spots and corrosion of chrome parts, wash with water, dry thoroughly, and apply a special protective coating. This should be done more frequently in winter.

Aluminum wheels

A protective coating is provided over the aluminum type wheels. Clean aluminum wheels with a cleaner designed for use on aluminum and apply an appropriate protection agent.

NOTE

(1) When cleaning aluminum type wheels, do not use abrasive cleaners. And wheels exposed to sea water or road chemicals should be cleaned as soon as possible.

(2) Brushes may damage the aluminum wheel surface. Be sure to use a sponge, chamois leather, etc.

(3) Do not apply hot water directly from the steam cleaner or similar to the wheel surface.

Window glass

The window glass can normally be cleaned using only a sponge and water.

Glass cleaner can be used to remove oil, grease, dead insects, etc. After washing the glass, wipe dry with a clean, dry, soft cloth. Never use the same cloth to wipe the window glass as would be used to wipe the paintwork; wax from the painted surfaces could adhere to the glass and reduce its transparency and visibility.

NOTE

To clean the inside of the rear window, be sure to use a soft cloth and wipe the window glass along the demister heater wires so as not to damage the heater wires.

* if fitted

Wiper blades

Use a soft cloth and glass cleaner to remove grease, dead insects, etc., from the wiper blades. Replace the wiper blades when they no longer wipe properly.

Chassis and underbody protection

Your vehicles underbody has been treated at the factory in order to protect it from rust and corrosion. Some areas have been injected with anti-corrosion agents and wax. The effectiveness of these measures, however, will be reduced by flying stones, road chemicals, etc., as the vehicle is driven. You should take your vehicle to your authorised PROTON dealer every 12 months to have body sheet metal inspected for condition, and it is recommended to have the underbody checked regularly (autumn and spring) and have additional protection treatment carried out as required.

As not all of the commercially available materials are suitable for use on your vehicle, it is recommended that you have this work carried out by an authorised PROTON dealer.

When washing the vehicle, especially in winter, spray the underbody with water to remove dirt and dust which might contain salts, road chemicals, etc.

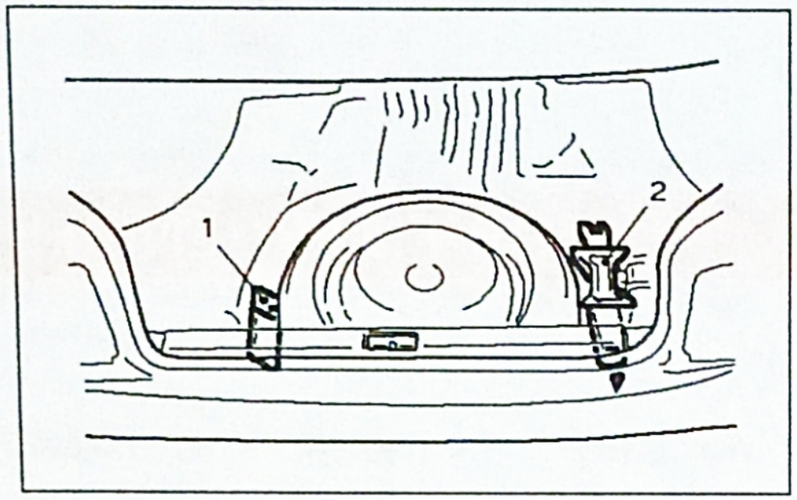
Engine compartment

Clean the engine compartment at the beginning and end of winter. Pay particular attention to flanges, crevices, and peripheral parts where dust containing road chemicals and other corrosive materials might collect.

If salt and other chemicals are used on the roads in your area, clean the engine compartment at least every three months.

FOR EMERGENCIES

Tools and jack	88
Jacking up the vehicle	89
Spare wheel	90
Wheel covers	90
If a tyre is punctured	91
Towing	93
Bleeding the fuel system (diesel-powered vehicle)	95
Removal of water from the fuel filter (diesel - powered vehicle)	96
Engine overheating	96
Emergency starting	98
Fuses	99
Changing a fuse	101
Replacement of lamp bulbs	101



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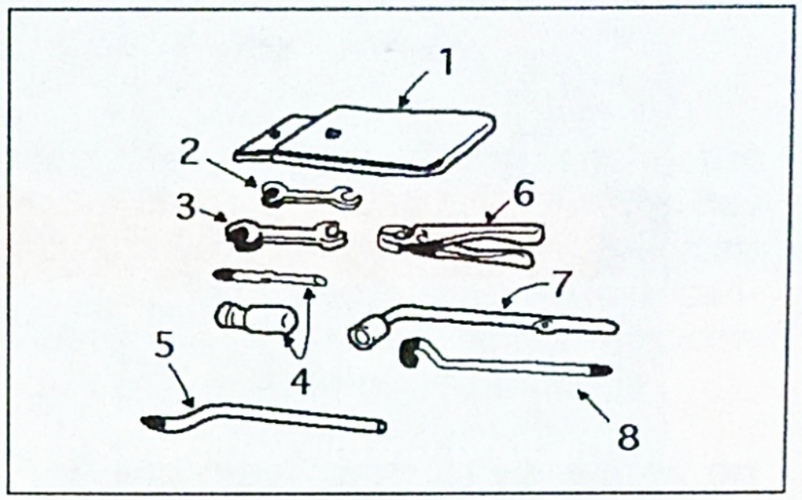

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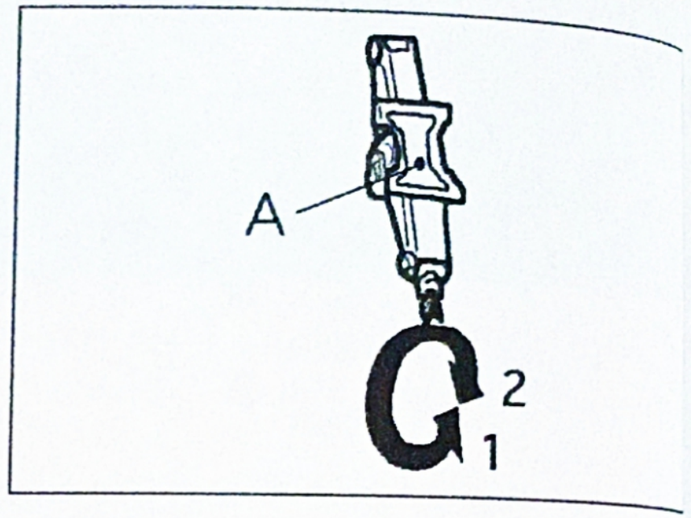


DOIAW007R3003

Tools and jack OWN009EMERG002MC

The storage location of the tools and jack should be remembered in case of an emergency.

Location

1 - Tools
2 - Jack

Tools

1 - Tool bag
2 - Wrench (small)
3 - Wrench (large)
4 - Screwdriver
5 - Wheel cover wrench (Vehicle equipped with wheel cover)
6 - Pliers
7 - wheel nut wrench
8 - Bar

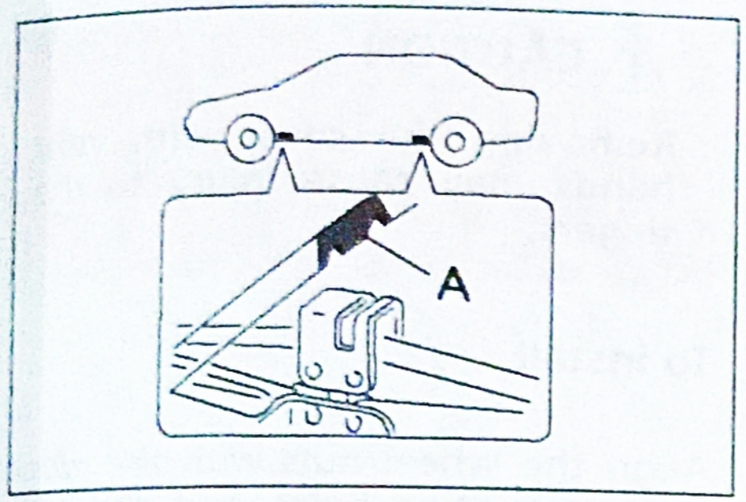
Jack

To remove

Turn the shaft end so that the jack retracts and detach it from fixing bracket (A).

To store

Turn the shaft end by hand to expand the jack until it is secured firmly in position.



DOIAW007R3004

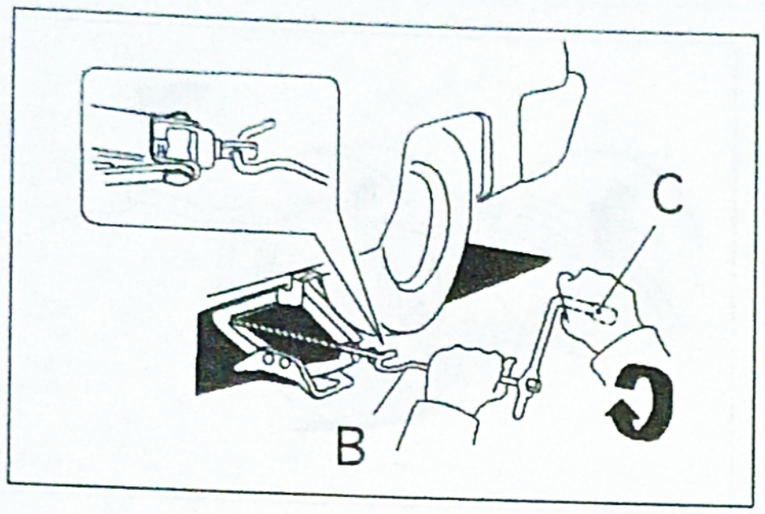
Jacking up the vehicle

OWN009EMERG003MC

Position the vehicle on a level and firm surface. Stop the engine, apply the parking brake and block the wheels with chocks.

Position the jack only at the specified points illustrated; use of the jack at other points could damage the vehicle body.

A - Jack-up point



DOIAW007R3005

In sert the bar (B) into the wheel nut wrench (C). Then set the end of the bar to the shaft's jack end, as shown in the illustration.

And turn it to raise or lower the jack.

⚠ CAUTION

(1) Use only the jack included with the vehicle and use it only for changing wheels.

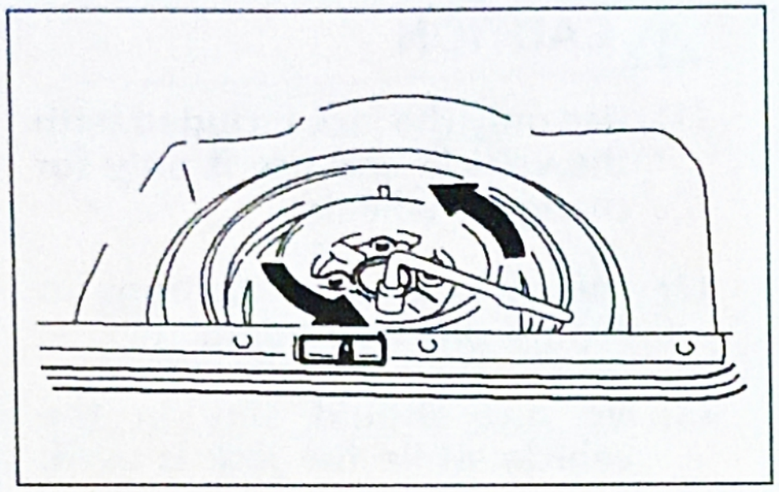
(2) Follow jacking instructions to ensure safe operation.

(3) No one should stay in the vehicle while the jack is used.

(4) Raise the vehicle so that the tyre just clears the ground. It is dangerous to raise the vehicle any higher.

(5) Never get under the vehicle while using the jack. Avoid jarring the raised vehicle or leaving it supported on the jack for any long time. Both are very dangerous.

(6) Do not start or run the engine while the vehicle is on the jack.



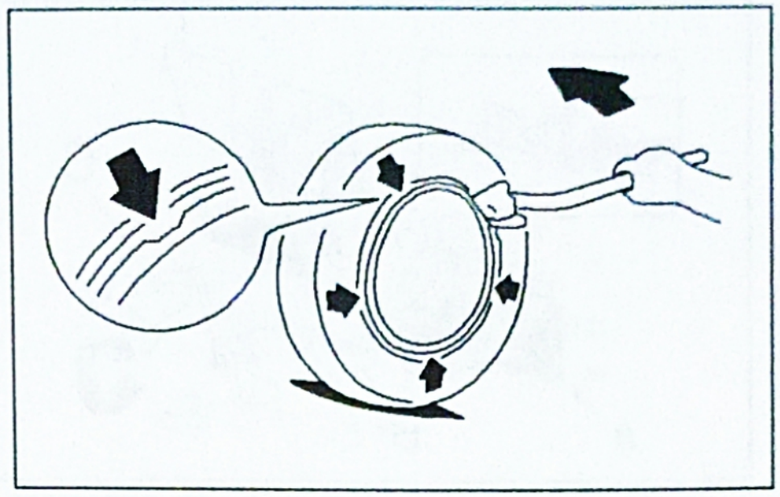
DOIAW009R3006

Spare wheel OWN009EMERG004MC

Check the air pressure of the spare tyre frequently and make sure it is ready for emergency use at any time.

Maintaining the spare wheel at the highest specified air pressure will ensure that it can always be used under any conditions (city/high-speed driving, varying load weight, etc.).

The spare wheel is stored beneath the floor board of the luggage compartment; to remove it, using the wheel nut wrench, remove the bolt securing the spare wheel, and take out the spare wheel.



DOIAW007R3007

Wheel covers OWN009EMERG005MC

To remove

Wrap the tip of the bar with a cloth, insert it deeply into the notch provided in the wheel cover, and pry the cover away from the wheel. Using the same procedure at the other wheel cover notches, work the wheel cover away from the wheel to remove it completely.

⚠ CAUTION

Removing the cover with your hands may cause injury to the fingers.

To install

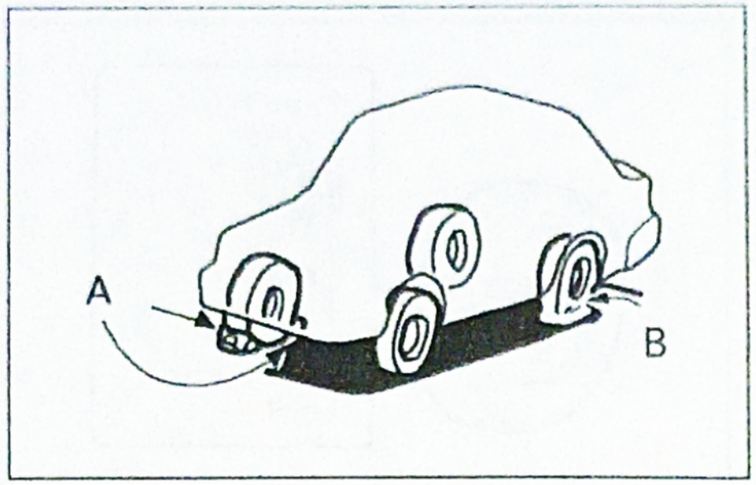
Align the wheel nuts with the wheel cover mounting holes, and also align the tyre valve with the valve opening provided on the wheel cover. Then tap around the outer edge of the wheel cover with your hand to secure it in place.

If a tyre is punctured

OWN009EMERG006MC

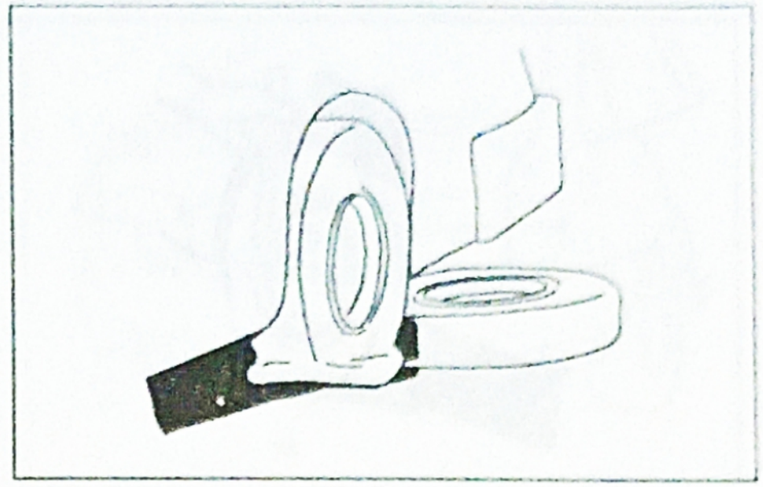
If a tyre must be changed due to a puncture, do so only after first following every precaution for safety: parking the vehicle in a place where it is not a traffic hazard or dangerous to you and your vehicle's occupants, on a flat surface.

1. Comply with local regulations concerning the protection of broke-down vehicle by switching on the hazard warning flashers, setting up a warning triangle, flashing signal lamp, etc., at an adequate distance from the vehicle. Have all passengers leave the vehicle.



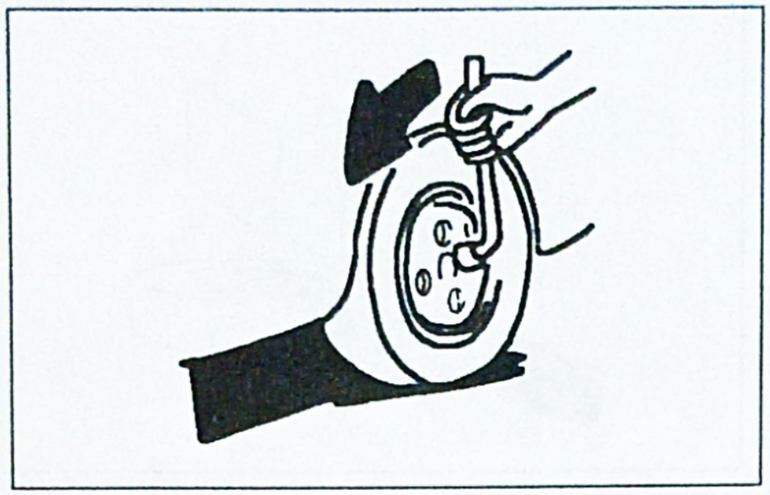
DOIAW009R3008

2. Position the vehicle on a flat, hard surface and apply the parking brake. To prevent the vehicle from rolling when it is raised on the jack, chock the wheel (A) diagonally opposite to that being changed (B).



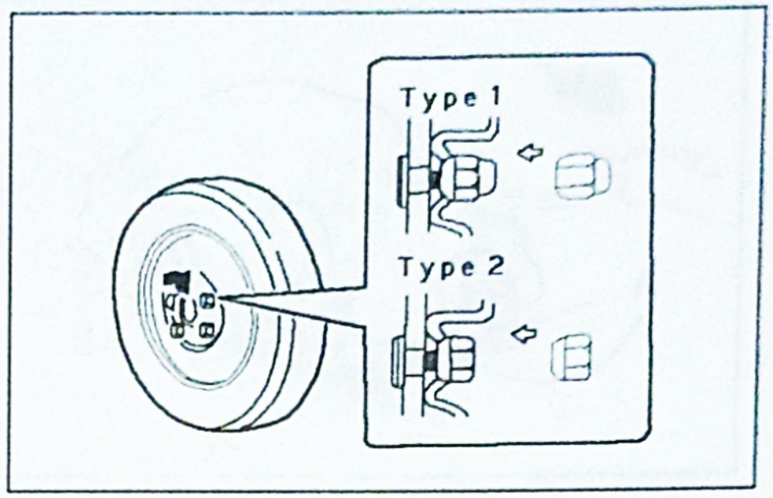
DOIAW009R3009

3. Get the spare wheel, jack and wheel nut wrench ready.
4. Place the spare wheel under the vehicle body near the jack this helps to minimize danger should the jack slip of possition.



DOIAW009R3010

5. After removing the wheel cover (Refer to the section entitled "Wheel covers"), loosen the wheel nuts with the wheel nut wrench. Do not remove the wheel nuts yet.
6. Refer to the section entitled "Jacking up the vehicle" to select a jacking point near the flat tyre at which to position the jack and then raise the vehicle until the tyre is slightly off the ground.
7. Remove the wheel nuts with the wheel nut wrench or by hand, then take the wheel off.

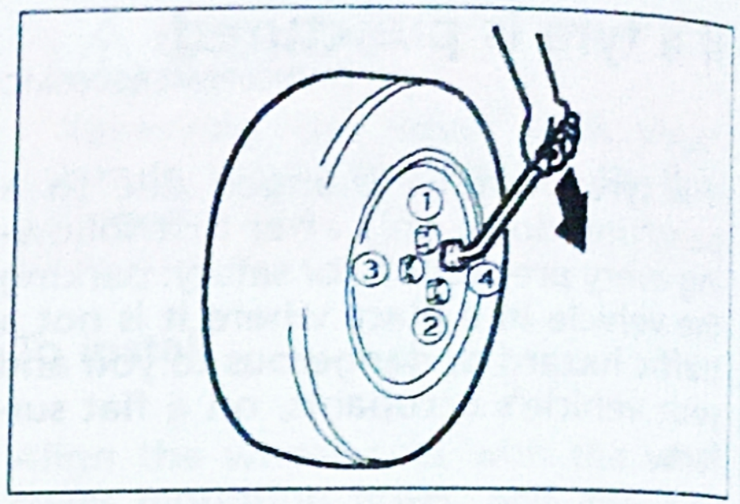


DOIAW007R3333

8. Install the wheel nuts with their tapered ends facing inward, then tighten by hand until the wheel is no longer loose.

⚠ CAUTION

Never apply oil to either wheel bolts or nuts as it will cause them to overtighten.



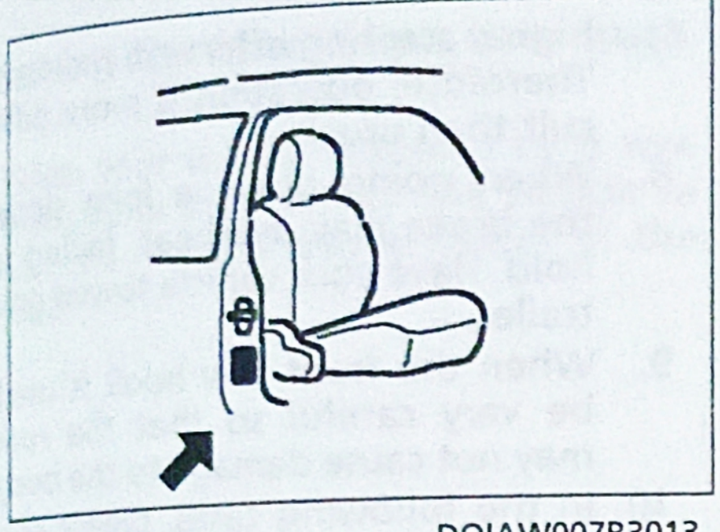
DOIAW009R3012

9. Lower the vehicle slowly and then tighten the nuts crisscross in two or three steps until each nut has been tightened to the specified torque.
Tightening torque:9-11 kgm (90-110 Nm; 6-7.3 ft.lbs).

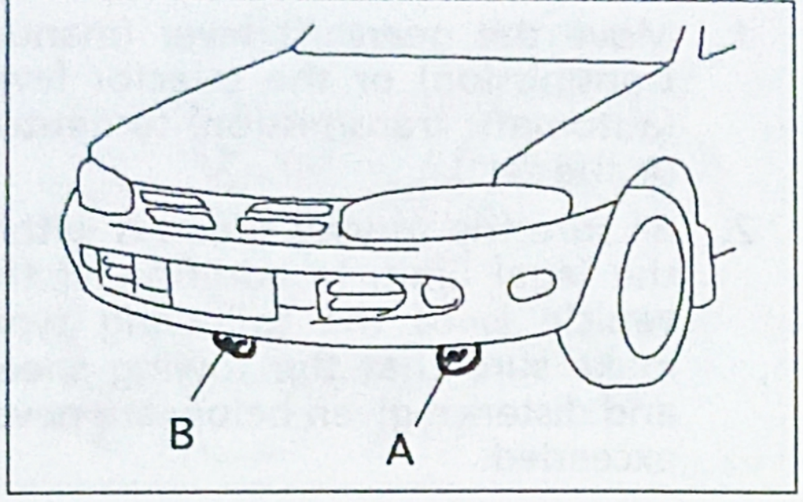
⚠ CAUTION

Never use extra force by your foot to the wheel nut wrench or a pipe extension as you can overtighten the nut.

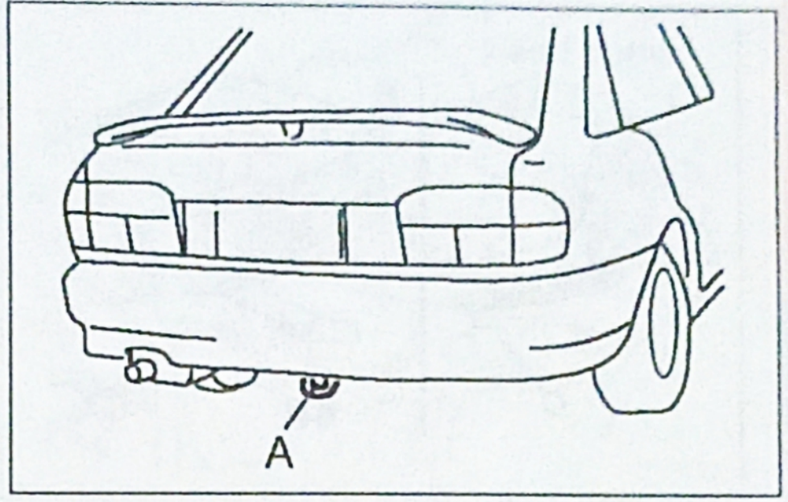
10. Lower and remove the jack and store the jack and flat tyre wheel. Have the flat tyre repaired as soon as possible.



DOIAW007R3013



DOIAW007R3014



DOIAW005R3333

11. Check tyre inflation pressure. The inflation pressure specification is shown on the label. See illustration.

⚠ CAUTION

(1) After changing the tyre, drive the vehicle for a few kilometers and retighten the wheel nuts to make sure that they are not loose.

(2) If the steering wheel vibrates when driving after change of the tyre, have the tyre checked for balance at your authorised Proton dealer.

(3) For the safety of your vehicle, be sure to avoid mixing one type of tyre with another type or using tyres of the size other than the specified size.

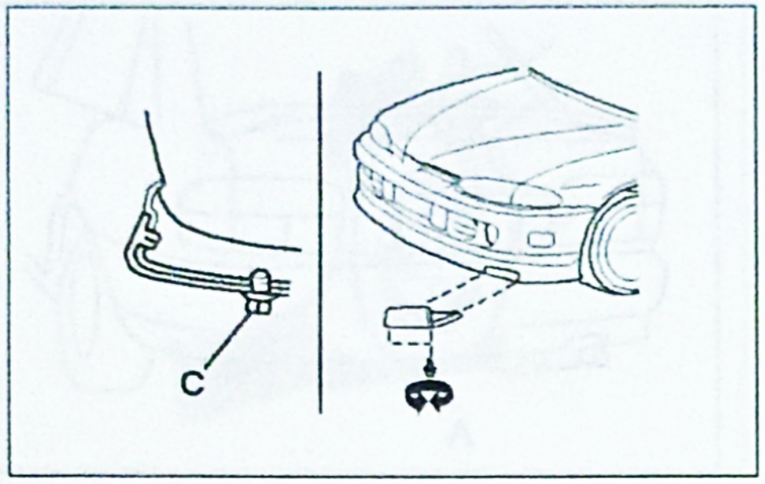
Towing

OWN009EMERG007MC

Your vehicle may be towed either by another vehicle with a rope, or by a tow truck . The regulations concerning towing may differ from country to country. It is recommended that you obey the regulations of the country where you are driving your vehicle.

Towing with a rope

The towing hooks (A) are located as shown in the illustrations. Always attach the tow rope to the towing hooks (A).



DOIAW007R9067

On vehicles with a large air dam, towing the vehicle without removing the covers causes the rope to interfere with the air dam, resulting in possible damage or deformation of the air dam. Be sure to remove the covers before towing.

Turn the clip(C) 90° anticlockwise (or clockwise) as well to remove the cover. After towing, reinstall the covers.

⚠ CAUTION

Do not attempt to use the tiedown hooks (B) for towing purposes.

Using any part other than the designeted towing hooks (A) could result in damage to vehicle body.

If your vehicle is to be towed, pay cafeful attention to the following points:

1. Move the gearshift lever (manual transmission) or the selector lever (automatic transmission) to neutral or the "N".
2. Be sure the towing speed is within the legal limit. In addition, if the vehicle is of the following type, make sure that the towing speed and distence given below are never exceeded.

   Vehicle with an automatic transmission

   Towing speed:50 km/h (31 mph)

   Towing distance:30 km (18.6 mile)
3. If the transmission is malfunctioning or damaged, or if a vehicle equipped with an automatic transmission must be towed farther than 30 km (18.6 mile), tow the vehicle with the front wheels raised off the ground.
4. Turn the ignition switch to the "ACC" or "ON" position to unlock the steering wheel.
5. Turn on the hazard warning lamps.
6. During towing make sure that close contact is maintained between the drivers of both vehicle, and that the vehicles travel at low speed. Avoid abrupt starting or stopping which might subject the vehicles to shock.
7. As the engine is not running, the brake booster and power steering pump do not operate. This means higher brake depression force and higher steering effort are required. Therefore, operation is more difficult than usual.
8. When going down a long slope, the brake may overheat, failing to hold. Have your vehicle towed on a trailer.
9. When the front tow hook is used, be very careful so that the rope may not cause damage to the body.
10. In the following cases, please contact the authorised Proton dealer.
    - The engine runs but the vehicle does not move.
      Or abnormal noise is produced.
    - No automatic transmission fluid is in the transmission.

⚠ CAUTION

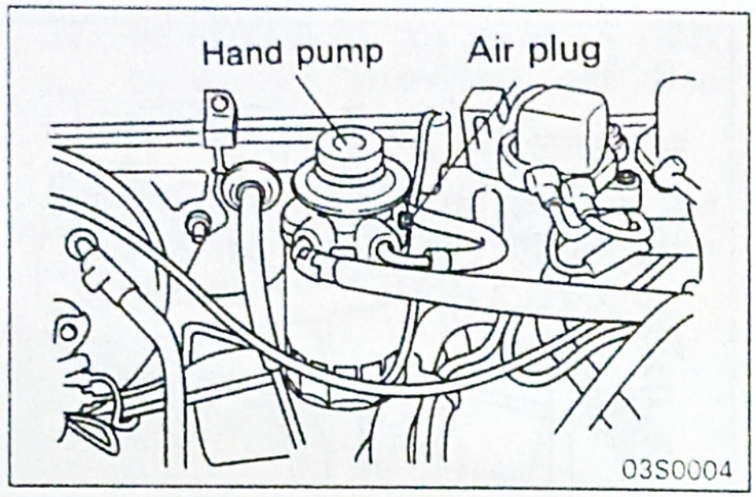
To prevent entry of exhaust gas from the towing vehicle, set the air selection lever on the ventilator control to recirculation position.

NOTE

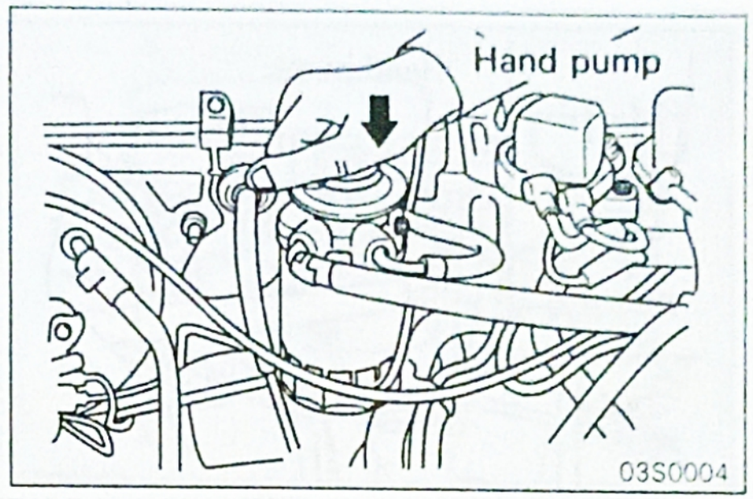
Your vehicle should only be used to tow another vehicle if the weight of the other vehicle is less than your vehicle.

Towing the vehicle by a tow truck

When your vehicle is towed by a tow truck, raise the front of the vehicle so that the front wheels are clear of the road.



DOIBW007R6001



DOIBW007R6002

Bleeding the fuel system (diesel-powered vehicle)

OWN009EMERG060

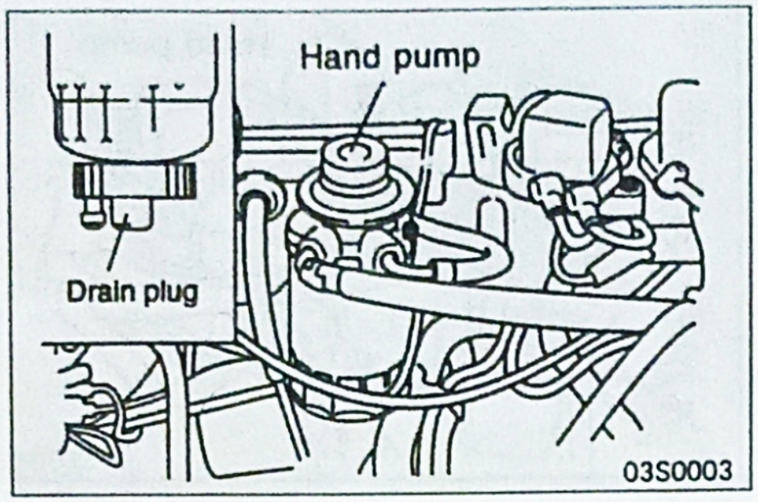
The fuel system should be bled to remove air as described below if the fuel supply is exhausted during travel.

1. Loosen the air plug at the top of the fuel filter.
2. Pump the hand pump until there are no more bubbles in the fuel coming out of the air plug. When doing this, place a cloth around the air plug to prevent the escaping fuel from spewing about.
3. Tighten the air plug when there are no more bubbles in the fuel.
4. Continue pumping until the hand pump becomes stiff.
5. Finally, check to be sure that there is no leakage of fuel. If in doubt, consult your nearest authorised Proton dealer.

⚠ CAUTION

(1) Do not smoke or have any other open flame near the car while bleeding the fuel system.

(2) Be sure to carefully clean away any fuel which spilled onto nearby parts when coming out of the air plug, because such accumulations of the fuel might ignite and cause a fire.



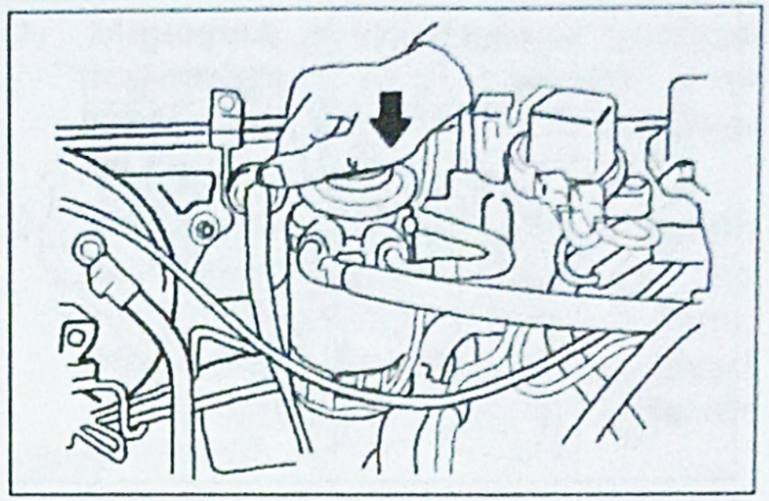
DOIBW007R6003

Removal of water from the fuel filter (diesel - powered vehicle)

OWN009EMERS061

If the warning lamp illuminates during driving, it indicates that water has accumulated in the fuel filter. If this occurs, remove the water as described below.

1. Loosen the drain plug at the bottom of the fuel filter.
2. Operate the hand pump slowly 6 or 7 times in order to force the water out through the drain plug.
3. Tighten the drain plug when water no longer comes out.



DOIBW007R6602

4. Loosen the air plug and bleed the air. (Refer to "Bleeding the fuel system").
5. Check to be sure that the warning lamp illumunates when the ignition key is turned to "ON", and that it goes off when the engine is started. If in doubt, consult your nearest authorized Proton dealer.

⚠ CAUTION

(1) Do not smoke or have any other open flame near the car while bleeding the fuel system.

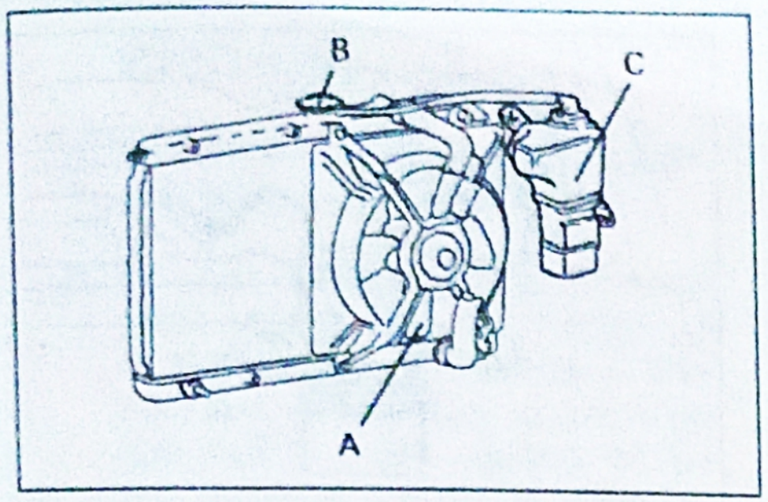
(2) Be sure to carefully wipe up any water drained out in this manner, because the fuel mixed in the water might ignited and result in a fire.

Engine overheating

OWN009EMERG008MC

If the water temperature gauge indication remains in the red zone for a long time, the engine may be overheating. If this occurs, take the following corrective measures:

1. Stop the vehicle in a safe place.



DOIAW007R3016

2. With the engine still running, raise the bonnet to ventilate the engine compartment.
   A. Radiator fan
   B. Radiator cap
   C. Reserve tank

NOTE

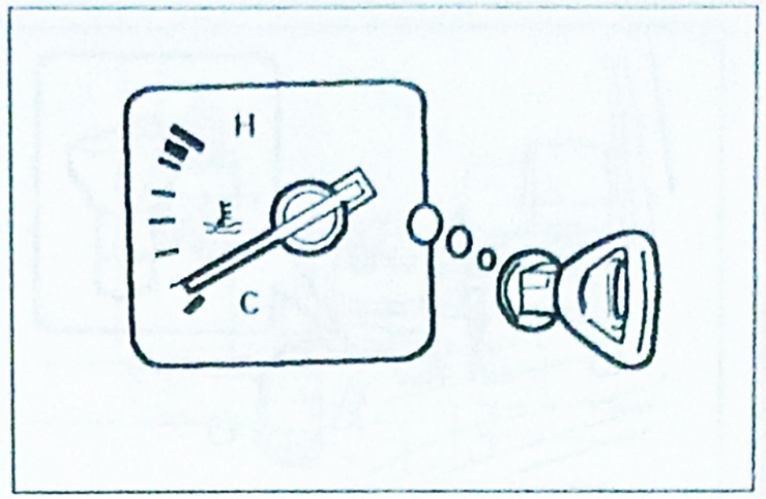
Confirm that the radiator fan is turning. If the fan is not turning, stop the engine immediately and contact an authorised PROTON dealer for assistance.

⚠ WARNING

(1) Remember under the bonnet, there can be boiling water gushing out or support bar could be burning hot. If the bonnet is opened suddenly, you could get burnt.

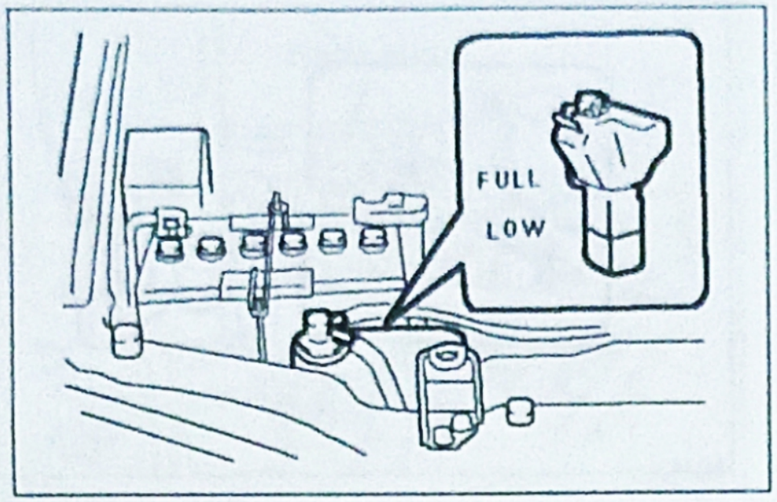
(2) Be careful of hot steam, which could be blowing off the reserve tank cap.

(3) Do not attempt to remove the radiator cap while the engine is hot.



DOIAW007R3017

3. After the engine coolant temperature has dropped, stop the engine.
4. Check the coolant level in the reserve tank. If there none, make sure that the engine has cooled down before removing the radiator cap, because hot steam or boiling water otherwise will gush from the filler port and may scald you.



DOIAW007R3018

5. Add coolant to the radiator and/or reserve tank if necessary (refer to the "Maintenance section).

⚠ CAUTION

Adding cold water rapidly when the engine is hot could cause the cylinder head and/or block to crack, add the water a little at a time while running the engine.

6. Examine the radiator hoses for coolant leakage and the V belt for looseness or damage.
   If there is anything wrong with the coolant system or V belt, have the problem corrected at an authorised PROTON dealer.

Emergency starting

OWN009EMERG009MC

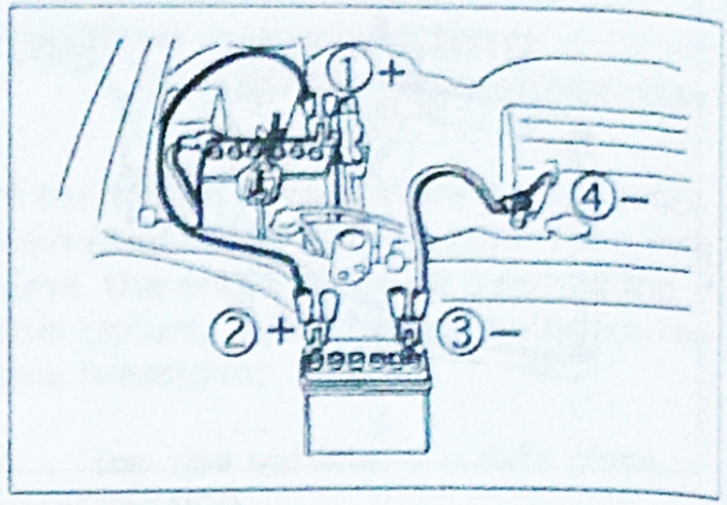
If the engine cannot be started because the battery is weak or dead, the battery from another vehicle can be used with jumper cables to start the engine.

⚠ CAUTION

Do not attempt to start the engine by pulling or pushing the vehicle. Use only specified jumper cable with sufficient cross-sectional area.

The following points should be observed:

1. Both batteries must be 12V. The capacity (Ah) of the battery supplying current should not be significantly below that of the discharged battery.
2. Use only heavy duty jumper cables.
3. A discharged battery can freeze. A frozen battery must be thawed out before connecting the jumper cables.
4. There should be no contact betwen the two vehicles; otherwise current may flow when the positive terminal is connected.
5. Run the engine of the vehicle supplying current.



DOIAW007R3019

6. Connect one end of one jumper cable to the positive (+) terminal of the discharged battery, and the other end to the positive (+) terminal of the booster battery.
7. Connect one end of the other jumper cable to the negative (-) terminal of the booster battery, and the other end to the engine block of the vehicle with the discharged battery at the point farthest from the battery.

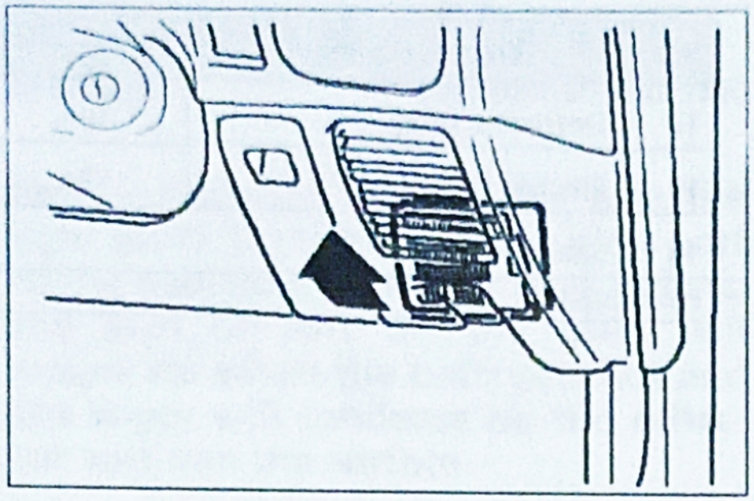
⚠ CAUTION

(1) Do not allow the jumper cable clips to touch one another.

(2) Do not connect the jumper cable to the negative terminal of the discharged battery. The battery generates explosive gas and a spark caused when the jumper cable is disconnected from the negative terminal could ignite this gas and cause an explosion.

(3) Use care not to get the jumper cables caught by turning parts such as cooling fan in the engine compartment.

8. Start the engine in the vehicle, which has the booster battery, let the engine idle a few minutes, then start the engine in the vehicle with the discharged battery.
9. After the engine is started, disconnect the cables in the reverse order.



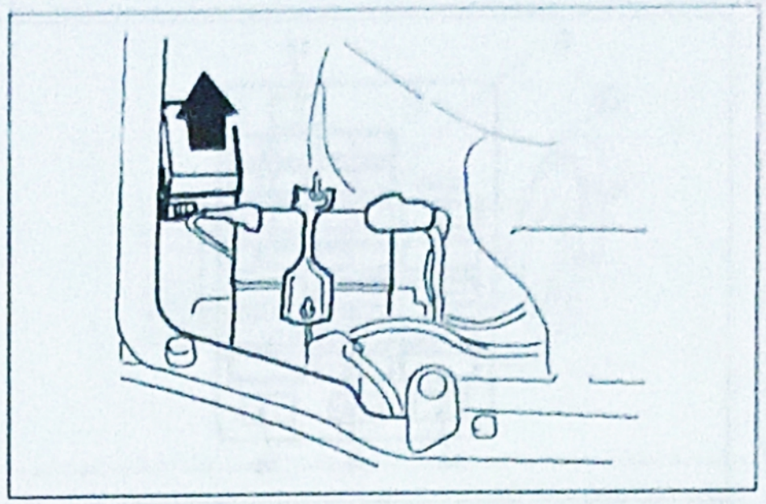
DOIAW007R3020

Fuses

OWN009EMERG010MC

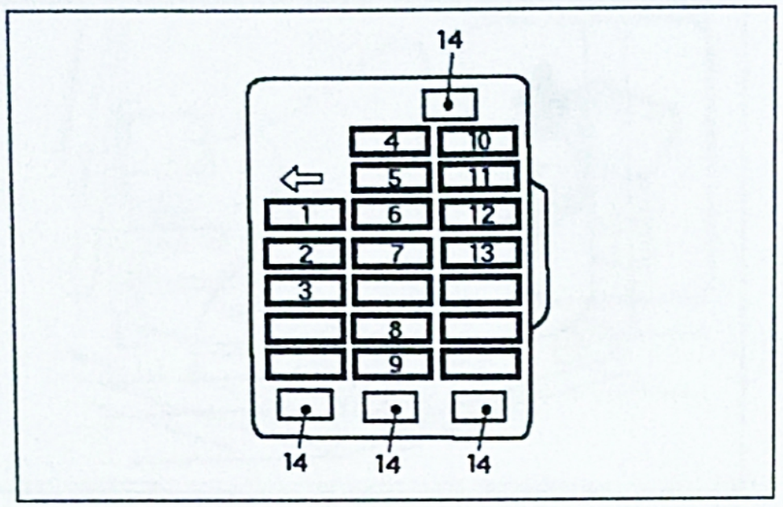
To prevent damage to the electrical system due to short-circuiting or overloading, each individual circuit is provided with a fuse. There are fuse housings in the passenger compartment and in the engine compartment.

The fuse housing in the passenger compartment is located in front of the driver's seat at the position shown in the illustration.



DOIAW007R3021

In the engine compartment, the fuse housing is located at the right front.



DOIAW007R3022

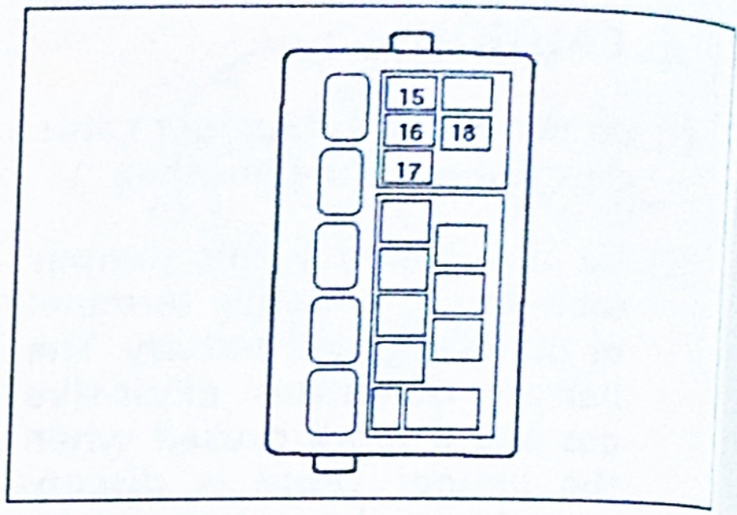
Fuse load capacity

The fuse housing cover lists the names of the electrical systems and the fuse capacities.

Passenger compartment

NO	Electrical system	Capacity
1	Reversing lamps	10A
2	Turn-signal lamps	10A
3	Gauge	10A
4	Blower motor and blower	20A
5	Windscreen wiper	15A
6	Radio(1)	10A
7	Cigarette lighter, mirror switch(1)	15A
8	Horn	10A
9	Stop lamps	15A
10	Room lamp, clock	10A
11	4 A/T(1)	10A
12	Defroster relay	10A
13	Electric Door locks(1)	15A
14	Spare fuses	

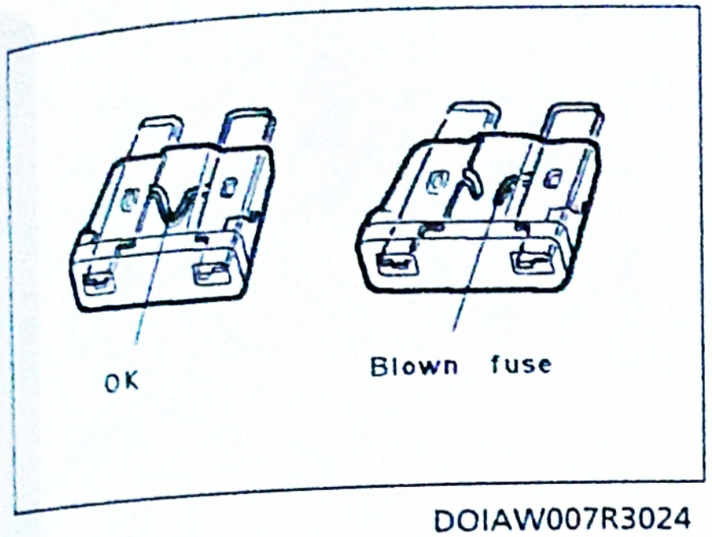
(1) If fitted



DOIAW007R3023

Engine compartment

NO	Electrical system	Capacity
15	Tail lamps RH	10A
16	Tail lamps LH	10A
17	Hazard warning flashers	10A
18	Headlight upper beam	10A



DOIAW007R3024

Changing a fuse

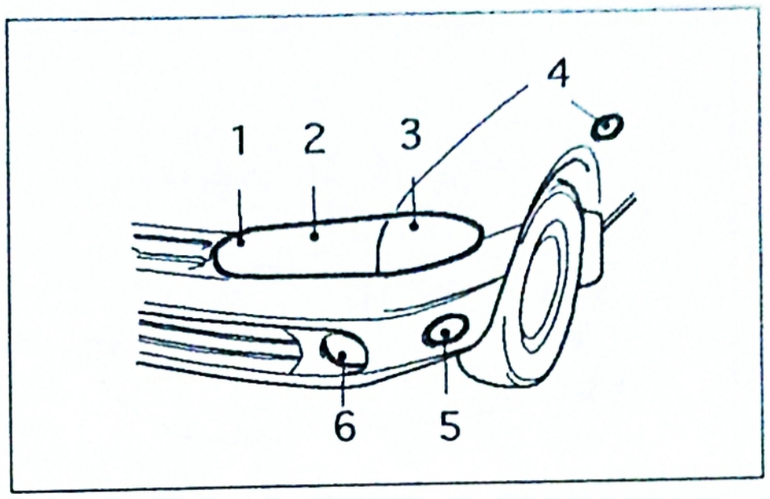
OWN009EMERG011MC

1. Before replacing a fuse, always turn off the electrical item concerned and turn the ignition key to the "LOCK" position.
2. Remove the fuse housing cover.
3. Refering to the fuse load capacity table, check the fuse pertaining to the problem.

Replacement of lamp bulbs

OWN009EMERG012MC

Before replacing a bulb, be sure the light is off. Do not touch the glass part of the new bulb with your bare fingers; the skin oil left on the glass will evaporate when the bulb gets hot and the vapor will condense on the reflector and dim the surface.



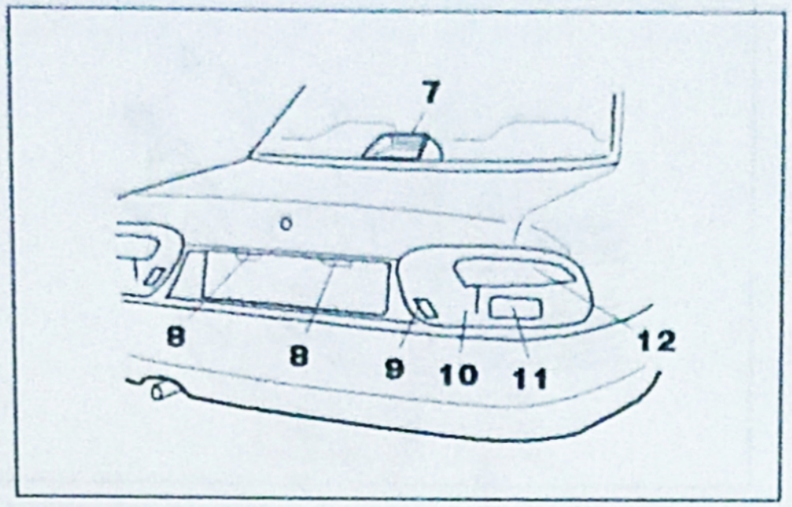
DOIAW007R3026

Bulb capacity

1	-	Position lamps	5W
2	-	Headlights, upper/ lower beam	60/55W
3	-	Front turn-signal lamp	21W
4	-	Side turn-signal lamp	5W
5	-	Cornering lamps(1)	21W
6	-	Front fog lamp	55W

(1) if fitted

A bulb should only be replaced with a new bulb of the same rating and type. The designation can be found on the base of the bulb.

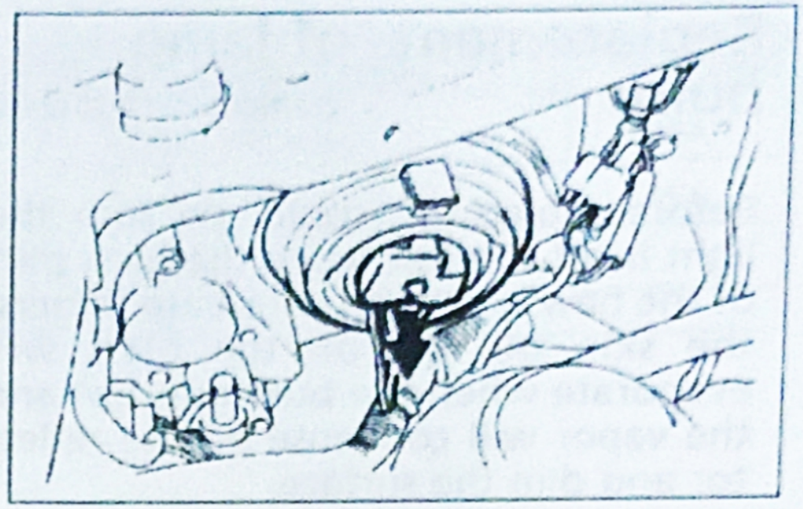


DOIAW007R8066

Outside

7	-	High-mounted stop lamp	18W(1) / 27W(2)
8	-	Licence-plate lamps	5W
9	-	Reversing lamps	21W
10	-	Stop and tail lamps	21/5W
11	-	Rear fog lamp(3)	21W
12	-	Rear turn-signal lamps	21W

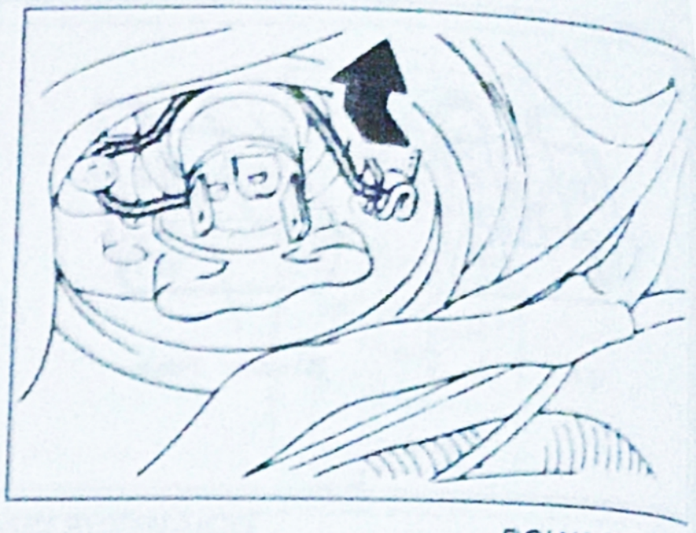
(1) Saloon
(2) Aeroback
(3) if fitted



DOIAW007R1111

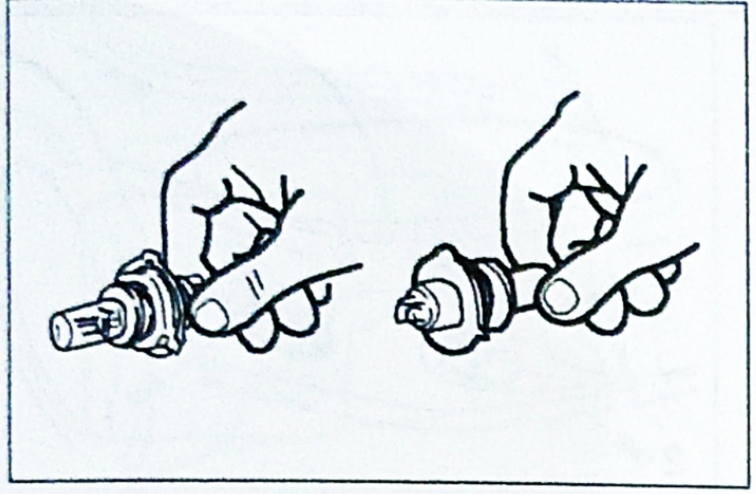
Headlights

Disconnect the connector and remove the sealing cover.

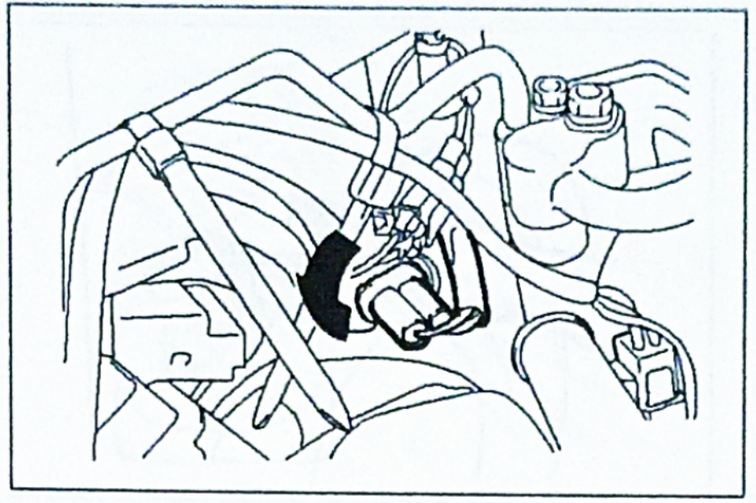


DOIAW007R1112

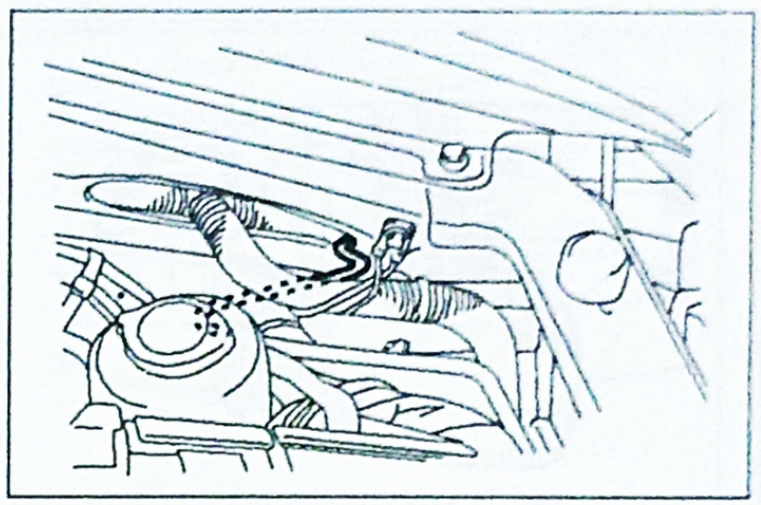
Unhook the spring which secures the bulb, and then remove the bulb.



DOIAW007R3030



DOIAW007R3031



DOIAW007R3032

⚠ CAUTION

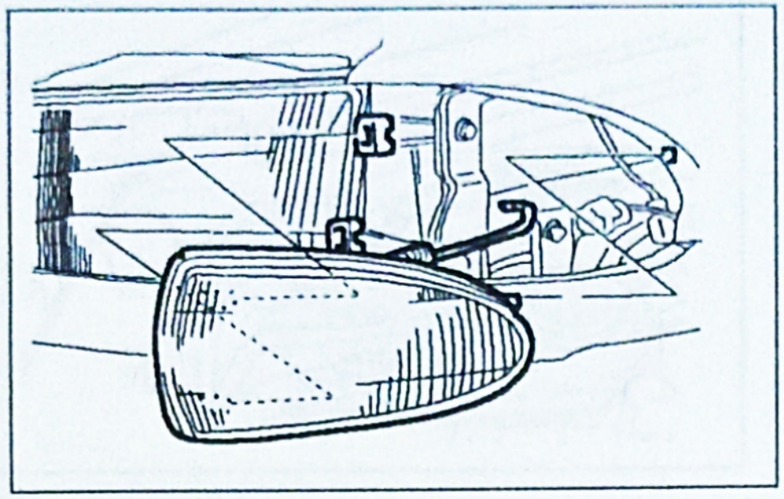
Never hold the halogen lamp bulb with a bare hand, dirty glove, etc. If the glass surface is dirty, it must be cleaned with alcohol, paint thinner, etc., and refit it after drying it thoroughly.

Position lamp

Remove the lamp socket by turning it anticlockwise. Then remove the bulb from the socket.

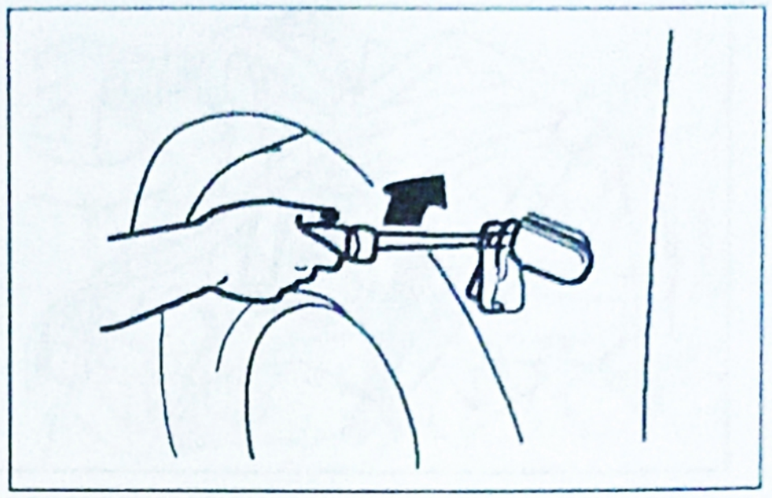
Front turn-signal lamps

Unhook the spring inside the engine compartment which secures the lamp unit.



DOIAW007R3033

Slide the lamp unit forward to remove it. Turn the lamp socket anticlockwise and pull it out and remove the lamp bulb. When mounting the lamp unit, align the pin on the lamp unit with the hole in the body.



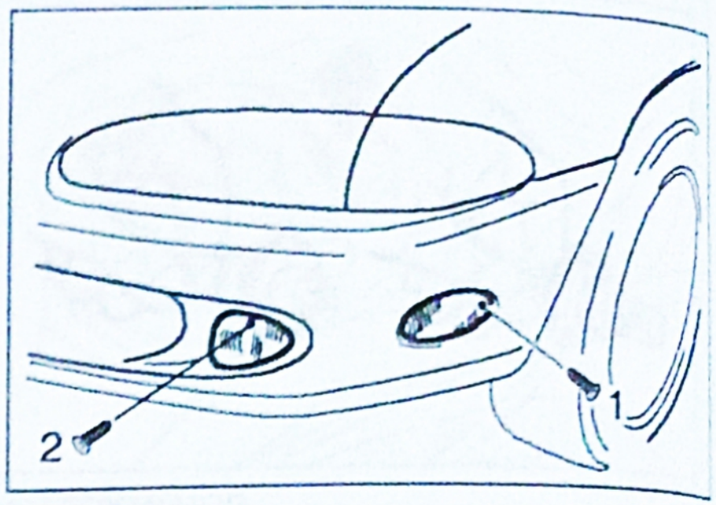
DOIAW009R3034

Side turn-signal lamps

Insert the tip of a screwdriver at the edge of the lens and remove the lens, then remove the socket assembly and bulb together by turning it anticlockwise, and then remove the bulb by pulling out.

NOTE

Wrap a piece of cloth around the tip of the screwdriver in order to avoid scratching the lens.

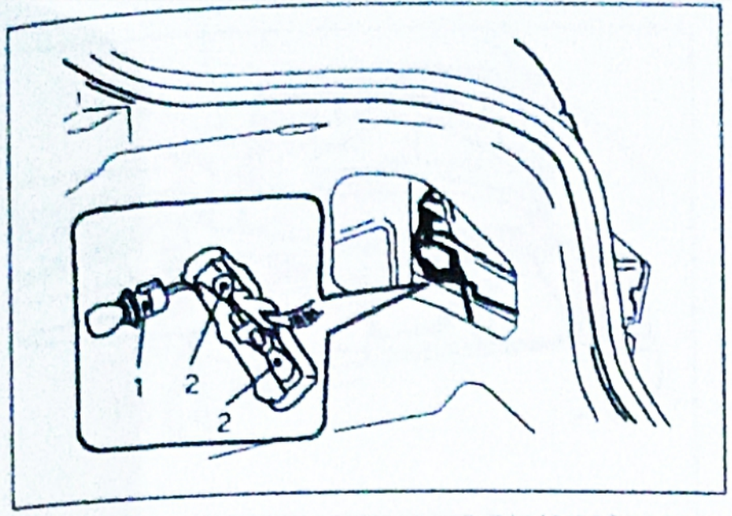


DOIAW003R8881

Cornering and Front fog lamps

1 - Cornering lamp
2 - Front fog lamp

Remove the lens mounting screws, and then remove the bulb from the socket by turning it anticlockwise while pressing it inward.



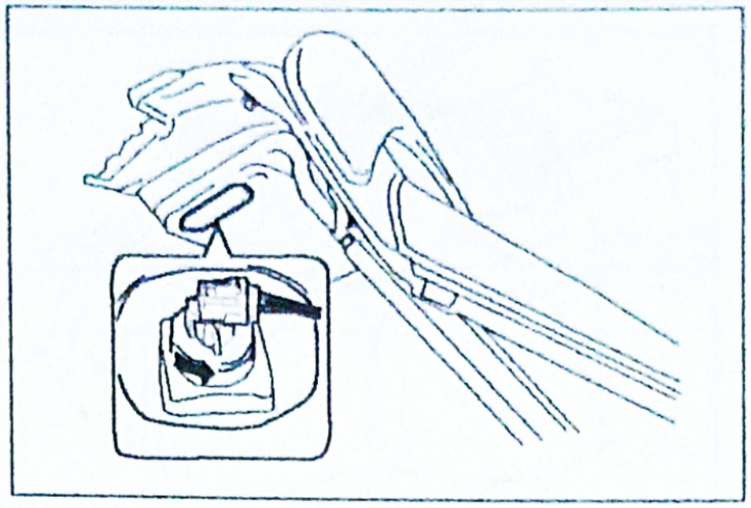
DOIAW007R3036

Rear combination lamps

Remove the lid and remove the socket assembly and bulb together.

Each bulb can be removed by turning it anticlockwise while pressing it inward.

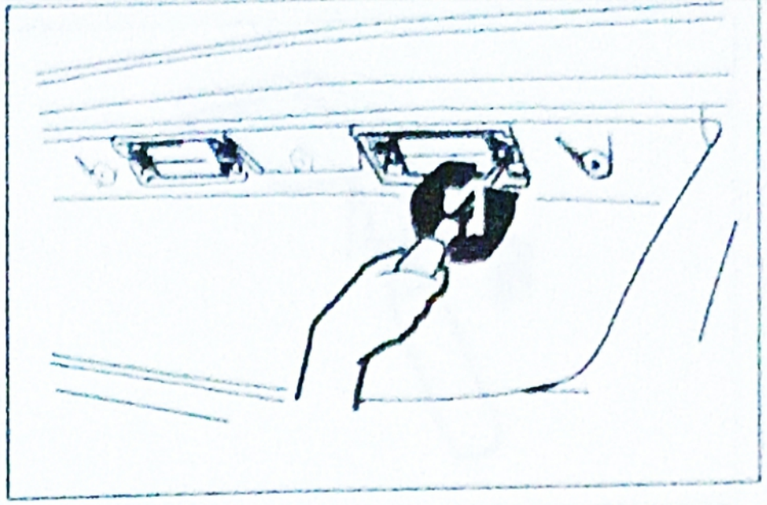
1 - Rear turn-signal lamp
2 - Stop lamp



DOIAW007R3037

Reversing lamps

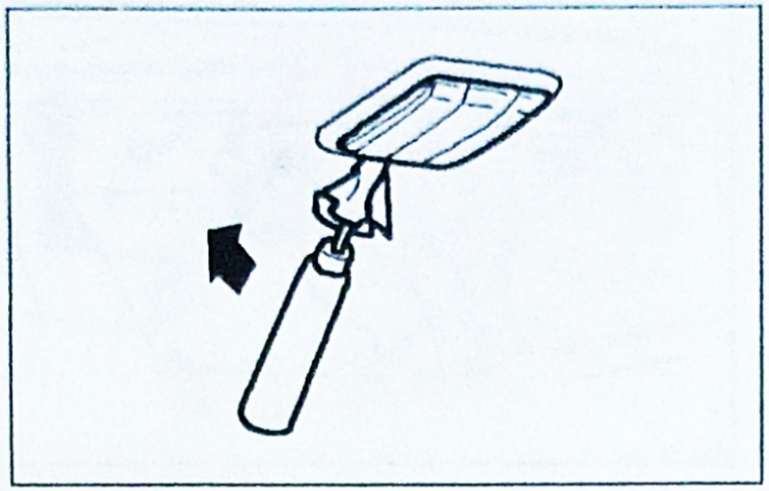
Remove the lid, turn the bulb socket anticlockwise to remove it and remove the bulb from the socket by turning it anticlockwise while pressing it inward.



DOIAW007R3038

Licence-plate lamps

Remove the lens mounting screws, remove the lens, then remove the bulb by pulling out.



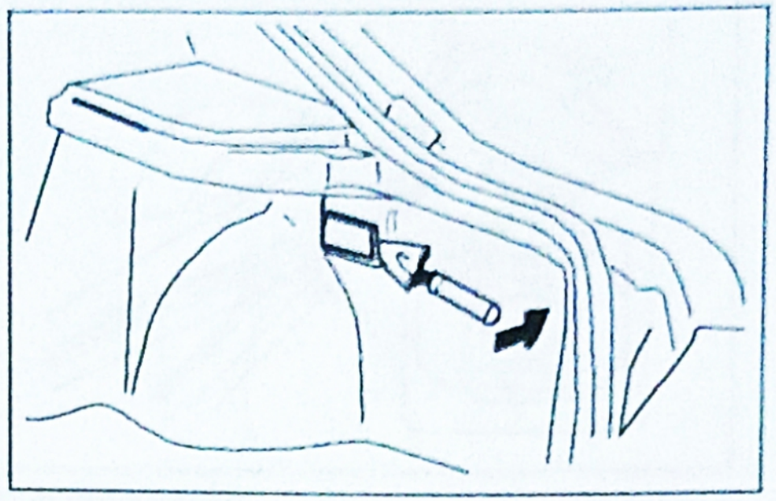
DOIAW007R3039

Room lamp

Insert a screwdriver into the notch of the lamp assembly and pry gently to remove the lens. Remove the lamp bulb from the lamp holder.

NOTE

Wrap a piece of cloth around the tip of the screwdriver in order to avoid scratching the lens.



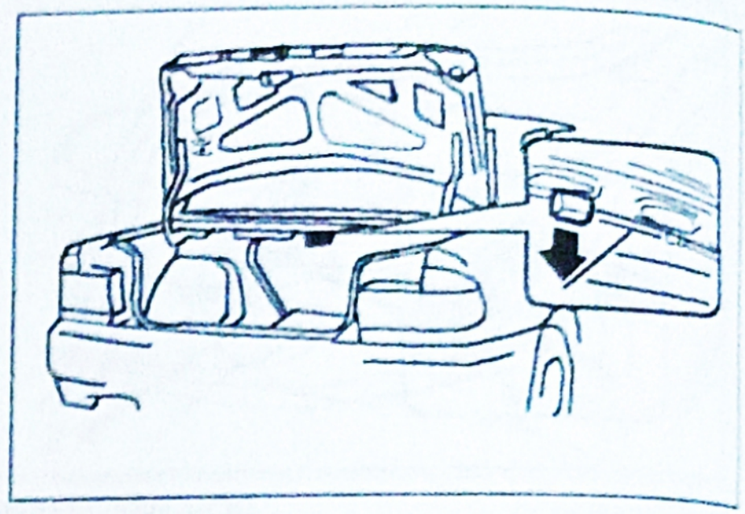
DOIAW007R3040

Luggage compartment lamp (Aeroback)

Insert the tip of a screwdriver at the front edge of the lens, remove the socket assembly and bulb together by turning it anticlockwise, and then remove the bulb by pulling out.

NOTE

Wrap a piece of cloth around the tip of the screwdriver in order to avoid scratching the lens.

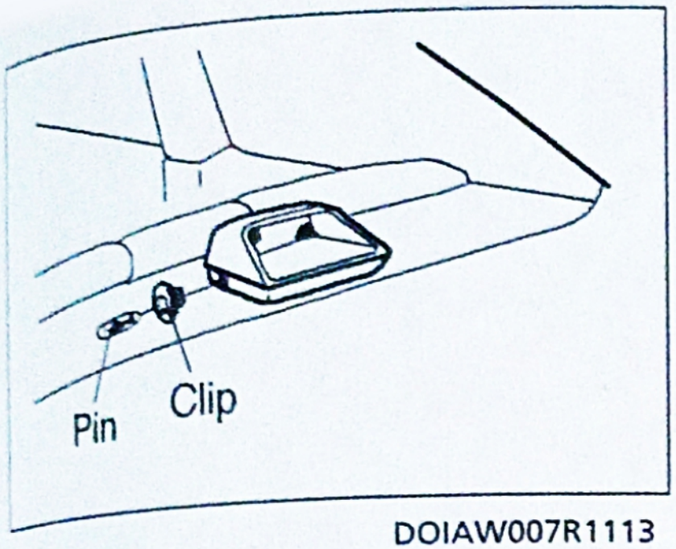


DOIAW007R3041

Luggage compartment lamp (Saloon) *

Remove the lamp lens by squeezing the sides, then remove the bulb from the lamp holder.

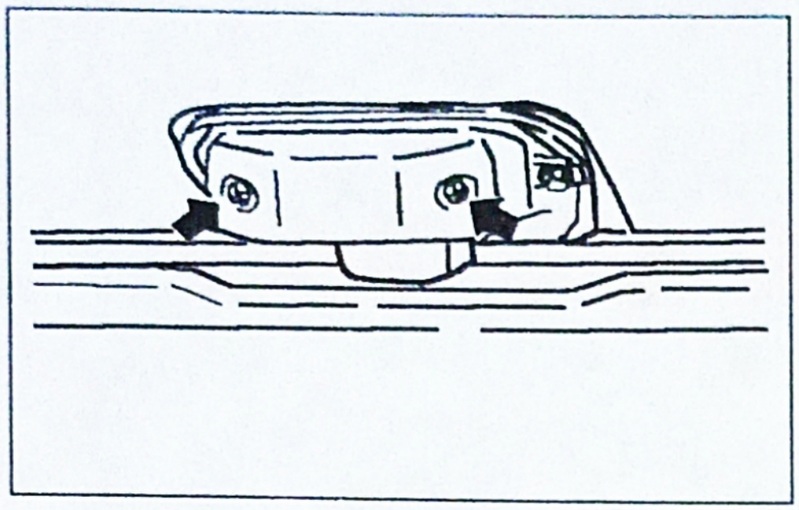
* if fitted



DOIAW007R1113

High-mounted stop lamp (on rear shelf)

Press in the pin to remove the clip. Take off the cover and remove the bulb from the socket by turning it anticlockwise while pressing it inward.



DOIAW007R3043

High-mounted stop lamp (Aeroback) *

Remove the high-mounted stop lamp cover installation screws and then remove the high-mounted stop lamp cover.

Remove the bulb from the high-mounted stop lamp cover by pulling it outward.

* if fitted

MAINTENANCE

General guideline	110
Engine oil	110
Automatic transmission fluid	111
Engine coolant	112
Battery	113
Brake fluid	114
Power steering fluid	115
Clutch fluid	115
Washer fluid	115
Wheel condition	116
Tyre inflation pressure	116
Tyre rotation	117
Fuel, engine coolant, oil and exhaust gas leakage	117
Meter, gauge and indication/warning lamp operation	117
Steering wheel free play	118
Clutch pedal free play	118
Brake pedal free play	118
Parking brake lever stroke	119
Hinges and latches lubrication	119
Wiper blades	119
Ventilation slots	120

General guideline

OWN010MAINT001MC

Adequate care of your vehicle at regular intervals serves to preserve the value and appearance as long as possible.

Some maintenance items can be carried out by the owner (do it yourself), while others should be done only by an authorised dealer (periodic inspection and maintenance). This section describes only those items which can be carried out by the owner. In the event a malfunction or other problem is discovered, have it corrected by an authorised PROTON dealer. This section contains information on inspection maintenance procedures that you can do yourself, if you so desire. Follow the instructions and cautions each of the various procedures.

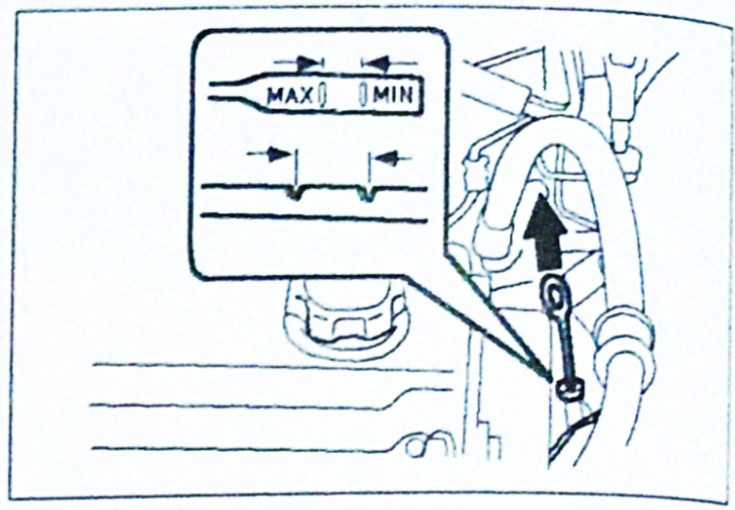
⚠ WARNING

(1) When checking or servicing the inside of the engine compartment, be sure the engine is switched off and has had a chance to cool down.

(2) If it is necessary to do work in the engine compartment with the engine running, be especially careful that your clothing, hair, etc., does not become caught by the fan, drive belts, or other moving parts.

(3) The fan may turn on automatically even if the engine is not running; turn the ignition switch to the "LOCK" and remove the key to ensure safety while you work in the engine compartment.

(4) Improper handling of components and materials used in the vehicle can endanger your personal safety. Consult an authorised Proton dealer for necessary information.



DOIAW008R3001

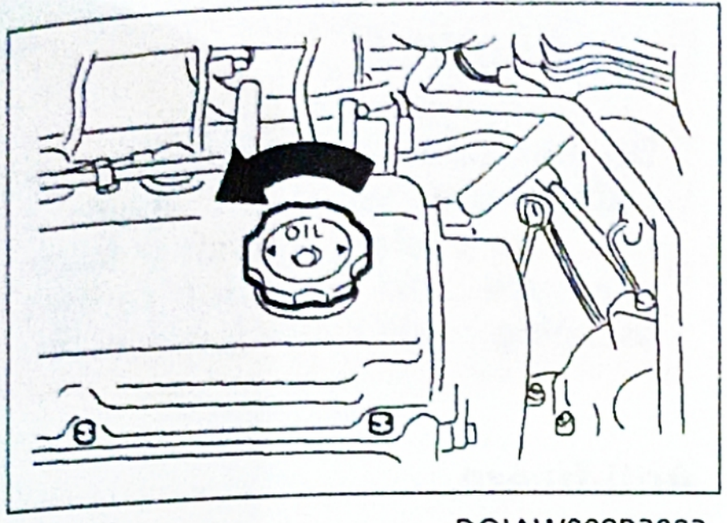
Engine oil

OWN010MAINT060

All engine consume a certain amount of oil during normal operation, and engine oil consumption is greatly influenced by payload, engine speed, etc. Therefore, it is important to check the oil level at regular intervals or before starting a long trip.

This check must be made with the engine warm but not running. Park the vehicle on a level surface, stop the engine, and then wait a few moments to allow the engine oil in circulation to return to the oil pan to ensure accurate measurement.

Remove the dipstick and wipe it with a clean cloth. Reinsert the dipstick as far as it goes. Remove the dipstick and read the oil level, which should always be within the range indicated in the figure.



DOIAW008R3002

If the oil level is below the specified limit, remove the cap located on the cylinder head cover and add enough oil to raise the level to within the specified engine range.

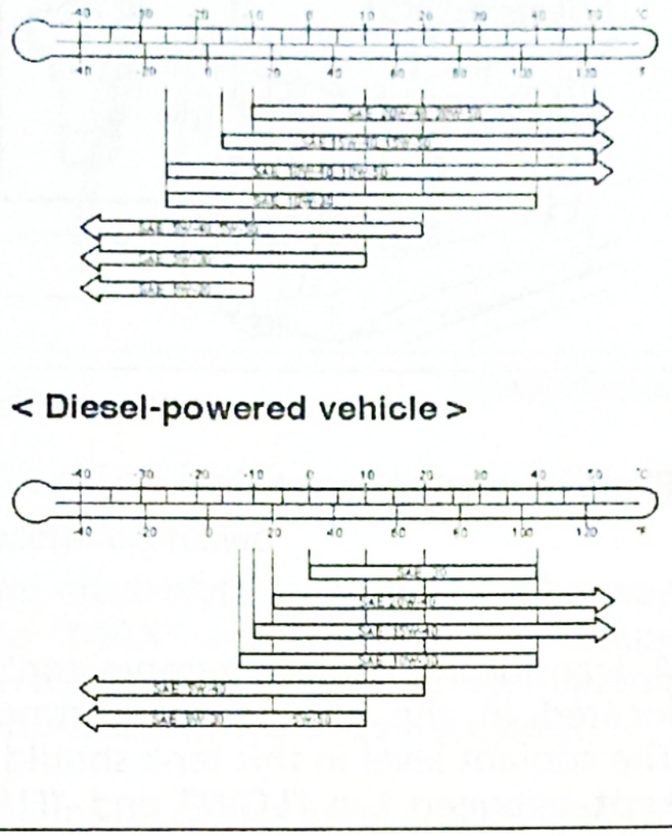
Be sure to use the specified engine oil and do not mix various types of oil. Also, avoid mixing different makes of oil together if possible. After adding oil, close the cap securely.

NOTE

For handling of used engine oils, refer to "General information" section on page 8.

< Petrol-powered vehicle >

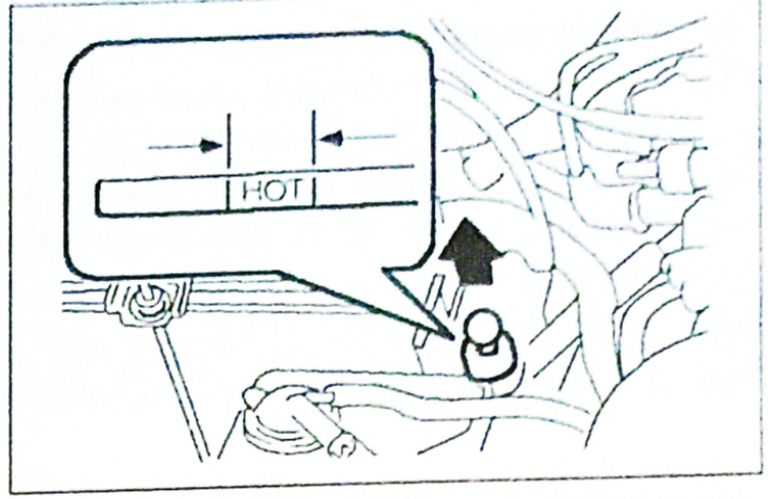
< Diesel-powered vehicle >



DOIBW009R9009

Selection of engine oil

1. Select Engine oil of the proper SAE viscosity number according to the atmospheric temperature.
2. Use engine oil conforming to the following API classification:
   PETROL-POWERED VEHICLES
   "FOR SERVICE SG" or higher
   DIESEL-POWERED VEHICLES
   "FOR SERVICE CD" or higher.



DOIAW008R3004

Automatic transmission fluid *

OWN010MAINT003MC

The proper amount of automatic transmission fluid is essential to the life and operation of the automatic transmission. Either insufficient fluid or excessive fluid could cause transmission trouble. The transmission fluid filler port cap is equipped with a dipstick. Use the following procedure to check the fluid level.

1. Check the fluid level after the vehicle has been driven enough to warm up the transmission fluid.
2. Park the vehicle on a flat, level surface and apply the parking brake.
3. With the engine idling and the brake pedal fully depressed, move the transmission selector lever through all the positions from the "P" to "L", stopping momentarily at each position.

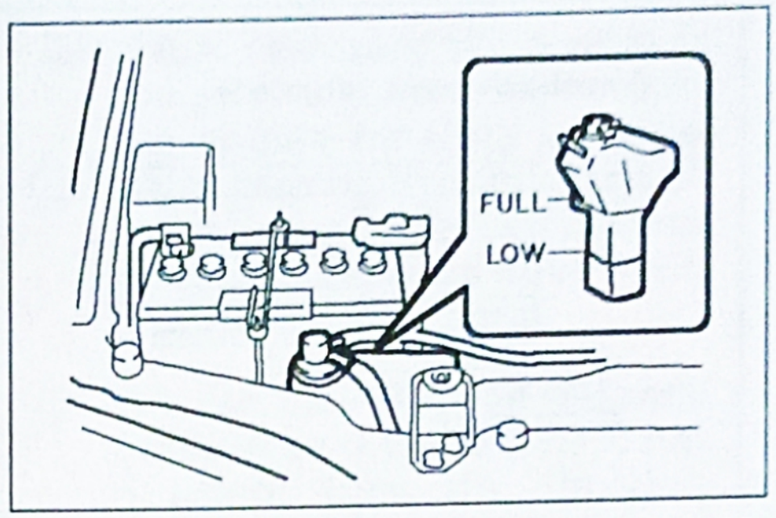
* if fitted

4. Move the selector lever to "N".
5. Remove the dipstick and wipe it with a clean lint-free cloth.
6. The fluid level should always be between the two marks on the dipstick.

DAIMOND ATF — SP or Proton ATF — SP should be used for replenishment.

⚠ CAUTION

Do not spill the fluid onto the exhaust manifold when it is inspected or added soon after driving. Wipe out eventual split fluid completely.This will help avoid danger of fire.



DOIAW008R3005

Engine coolant

OWN010MAINT004MC

A translucent coolant reserve tank is located in the engine compartment. The coolant level in this tank should be kept between the "LOW" and "FULL" marks when measured while the engine is warm and idling.

The cooling system is a closed system and normally the loss of coolant should be very slight. A noticeable drop in the coolant level could indicate leakage. If this occurs, have the system checked at an authorised PROTON dealer as soon as possible. If the level should drop below the "LOW" level on the reserve tank, open the lid and add coolant.

Also, if the reserve tank is completely empty, remove the radiator cap and add coolant until the level reaches the filler neck.

⚠ CAUTION

Do not open reserve tank lid or radiator cap while the engine is hot. The coolant system is under pressure and any hot coolant escaping could cause severe burns.

Anti-freeze

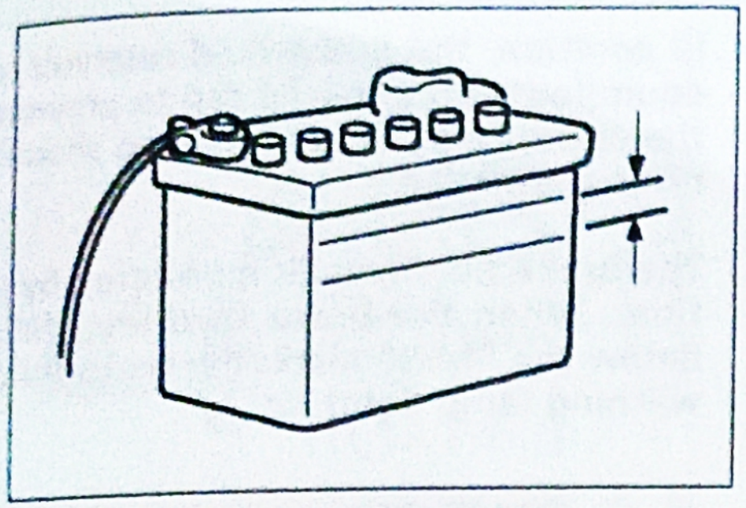
The engine coolant contains an ethylene glycol anti-corrosion agent. The cylinder head and water pump housing are cast aluminium alloy, and periodic changing of the engine coolant is necessary to prevent corrosion of these parts.

Because of the necessity of this anti-corrosion agent, the coolant must not be replaced with plain water.

⚠ CAUTION

For effective anti-corrosion and anti-freeze performance, keep the anti-freeze concentration within the range of 25 to 35%.

Concentrations exceeding 35% will result in a reduction of both the anti-freeze and cooling performance thus adversely affecting the engine.

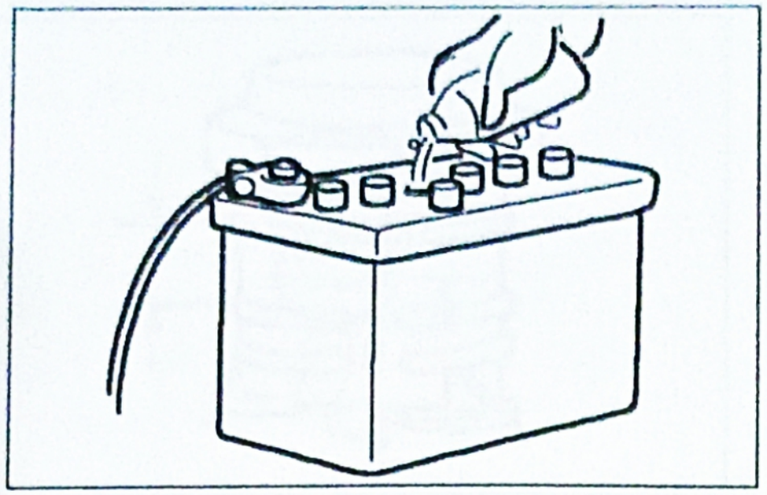


DOIAW008R1144

Battery

OWN010MAINT005MC

The condition of the battery is very important for quick starting of the engine and proper functioning of the vehicle's electrical system. Regular inspection and care are especially important in cold weather.



DOIAW008R3007

Checking battery electrolyte level

The electrolyte level must be between the "MAX" and "MIN" marks stamped on the outside of the battery. Replenish with distilled water as necessary.

The inside of the battery is divided into several compartments; remove the cap from each compartment and fill to the "MAX" mark. Do not over-replenish beyond the "MAX" mark because spillage during driving could cause damage.

Check the electrolyte level at least once every four weeks, depending on the operating conditions. If the battery is not used, it will discharge by itself with time. Check it once every four weeks and charge with low current as necessary.

Disconnection and connection

To disconnect the battery cable, stop the engine, first disconnect the negative terminal and then the positive terminal. When connecting the battery, first connect the positive terminal and then the negative terminal.

⚠ CAUTION

(1) Keep the terminals clean. After the battery is connected, apply terminal protection grease. To clean the terminals use luke warm water.

(2) Never short-circuit the battery, doing so could cause it to overheat and be damaged.

(3) Do not smoke or bring an open flame near the battery, doing so could ignite the explosive gas generated by the battery.

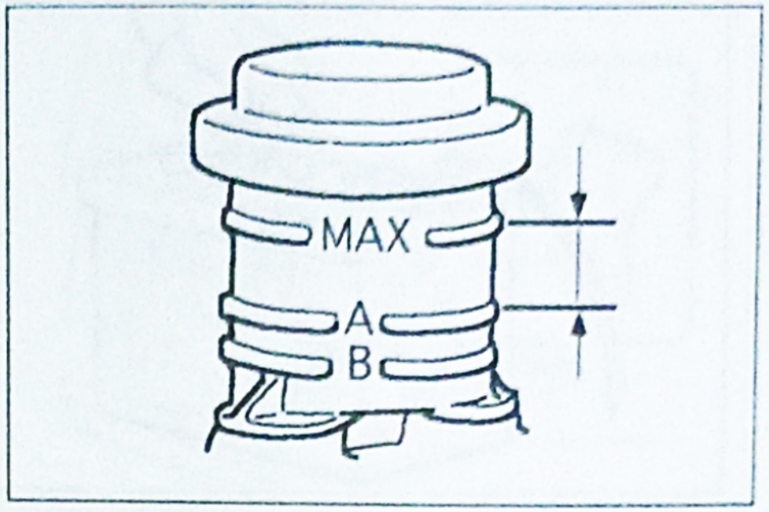
(4) The battery electrolyte is extremely caustic. Do not allow it to come in contact with your eyes, skin, clothing or the painted surfaces of the vehicle. Spilled electrolyte should be flushed immediately with ample amounts of water.

Irritation to eyes or skin from contact with electrolyte requires immediate medical attention.

(5) If the battery is to be quick-charged, first disconnect the battery cables.

(6) In order to prevent a short circuit, be sure to disconnect the negative (-) terminal before doing anything else.

(7) Keep it out of the reach of children.



DOIAW008R3008

Brake fluid

OWN010MAINT006MC

Check the brake fluid level in the reservoir.

The brake fluid level must be between the "MAX" and "A" marks on the reservoir. The fluid level falls slightly with wear of the brake pads, but this does not indicate any abnormality.

If the brake fluid level falls markedly in a short length of time, it indicates leaks from the brake system. If this occurs, have the vehicle checked at an authorised PROTON dealer.

Use brake fluid conforming to DOT3 or DOT4. The brake fluid is hygroscopic. Too much moisture in the brake fluid will adversely affect the brake system, reducing the brake performance.

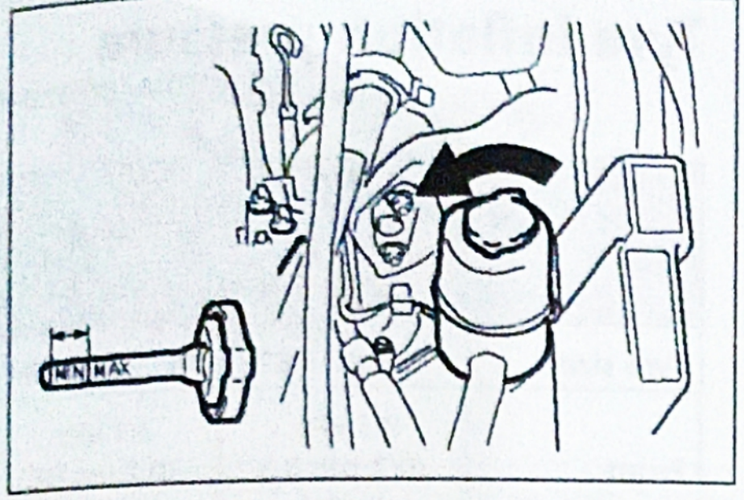
In addition, the brake fluid reservoir is equipped with a special cap to prevent the entrance of air, and this cap should not be removed.

The brake fluid level is monitored by a float. When the brake fluid level falls below the "MIN" mark, the brake fluid warning lamp lights up.

⚠ CAUTION

(1) Use only the specified brake fluid. Also the additives in different brands may result in a chemical reaction when mixed together so avoid mixing different brands if possible.

(2) Brake fluid is toxic and corrosive.



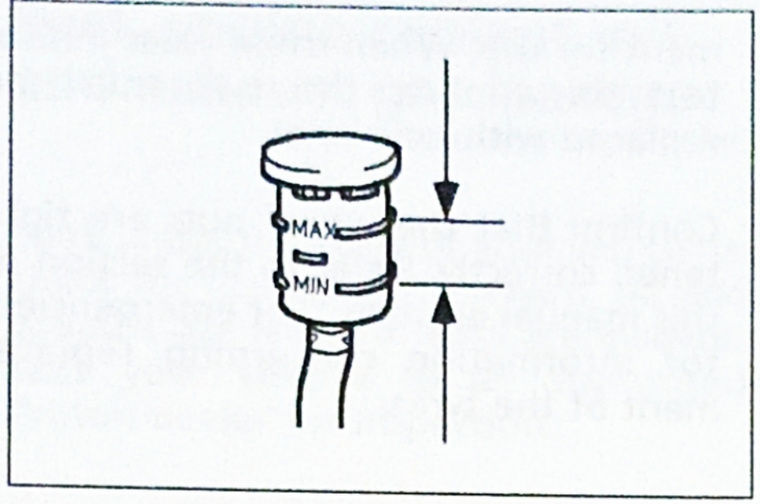
DOIAW008R3009

Power steering fluid

OWN010MAINT007MC

Check the fluid level in the reservoir while the engine is idling.

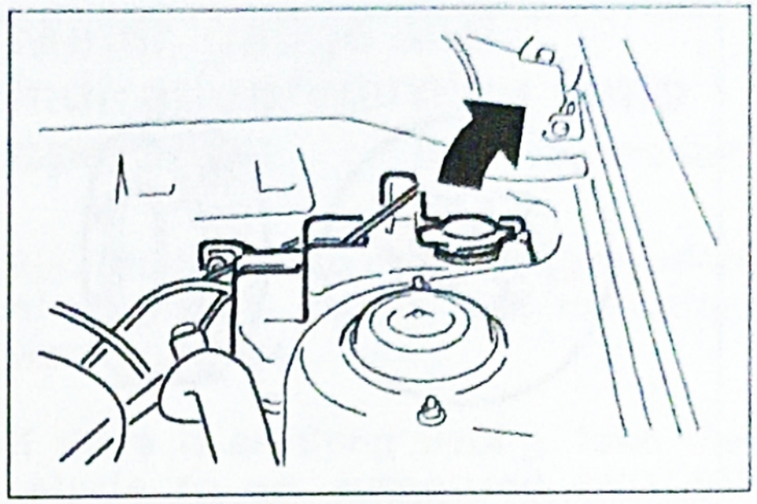
Unscrew the reservoir cap; the level in this tank should be kept between the "MAX" and "MIN" lines. Use "DEXRON" or "DEXRON II" automatic transmission fluid.



DOIAW008R3010

Clutch fluid * OWN010MAINT008MC

The clutch fluid reservoir is located at the rear of the engine compartment. The fluid level should always be between the "MAX" and "MIN" marks on the reservoir. Use only DOT3 or DOT4 brake fluid.



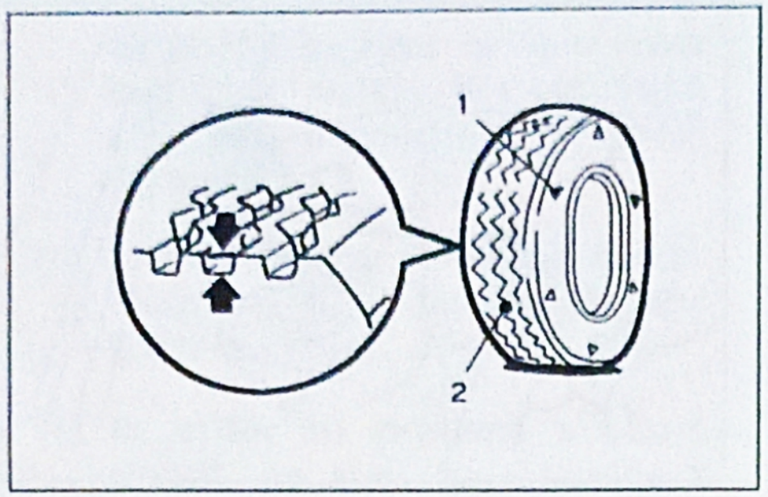
DOIAW008R3011

Washer fluid OWN010MAINT009MC

Check the washer fluid level in the container.

If the level is low, replenish the container with washer fluid.

* if fitted



DOIAW008R3012

Wheel condition

OWN010MAINT010MC

1 - Tread wear indicator position

2 - Tread wear indicator

Check the tyres for cuts, cracks and other damage. Replace the tyre if there are deep cuts or cracks. Also check each tyre for pieces of metal or pebbles.

The use of worn tyres can be very dangerous because of the greater chance of skidding or hydroplaning. The tread depth of the tyres must exceed 1.6 mm in order for the tyres to meet the minimum requirement for use.

If there are belt-line wear indicators on the tyres, they will appear in six places on the surface of the tyre as the tyre no longer meets the minimum requirement for use. When these wear indicators do appear, the tyre must be replaced with new ones.

Confirm that the wheel nuts are tightened correctly. Refer to the section of this manual entitled "For emergencies" for information concerning replacement of the tyres.

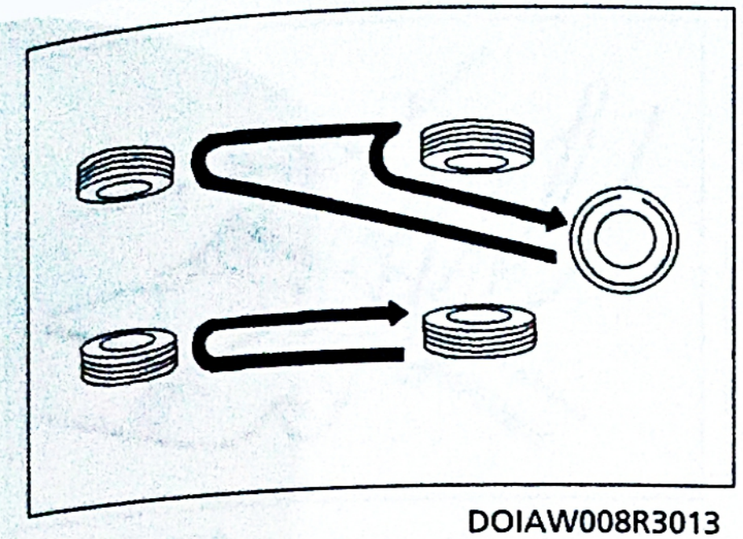
Tyre inflation pressure

OWN010MAINT011MC

	1300 1500 2000(1)	1600 1800
Tyre size	175/70R13 82H	185/60R14 82H
Front	2.1 kPa (0.2 psi; 0.6 in.Hg)	2.1 kPa (0.2 psi; 0.6 in.Hg)
Rear	2.1 kPa (0.2 psi; 0.6 in.Hg)	2.1 kPa (0.2 psi; 0.6 in.Hg)
Above 160 km/h (99.4 mph)	—	+0.3 (30)

(1) Diesel powered vehicle

Check the tyre inflation pressure of all the tyres while they are cold; if insufficient or excessive, adjust to the specified value. After the tyre inflation pressure has been adjusted, check the tyres for damage and air leaks. Be sure to put rubber caps on the valves.



DOIAW008R3013

Tyre rotation OWN010MAINT012MC

On a front-wheel -drive vehicle, the front tyres both steer the vehicle and provide traction; therefore they may wear more rapidly than the rear tyres.

Tyres tend to wear unenly over a long period of service. To make sure that the tyres wear as evenly as possible for longer life, rotate the wheels in the sequence illutrated.

Wheel rotation

Every 20000 km (12427.4 mile) or 12 months, whichever comes first

Take the vehicle to an authorised Proton dealer to have the wheels properly balanced.

Fuel, engine coolant, oil and exhaust gas leakage

OWN010MAINT013MC

Look under the body of your vehicle to check for fuel, engine coolant, oil and exhaust gas leaks. If leaks are evident, take your vehicle to an authorised Proton dealer for inspection.

⚠ WARNING

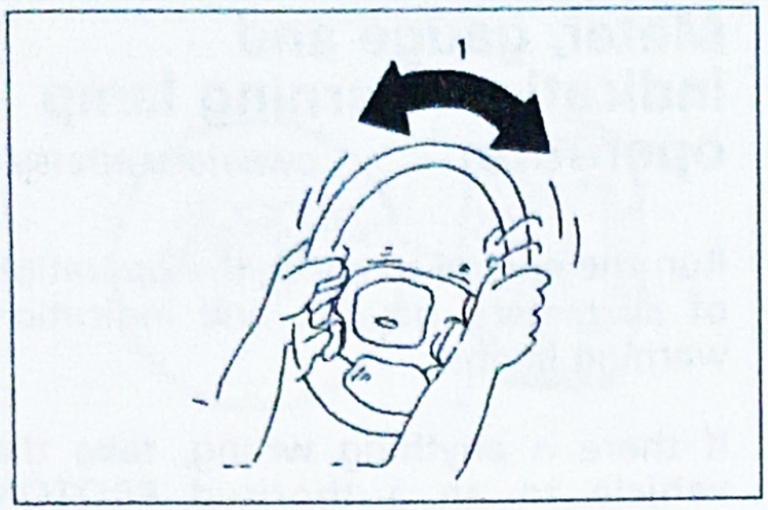
If you see a suspected fuel leak or if you smell fuel, do not operate the vehicle; call an auhtorised PROTON dealer for assistance.

Meter, gauge and indication/warning lamp operation

OWN010MAINT015MC

Run the engine to check the operation of all meters, gauges, and indication warning lamps.

If there is anything wrong, take the vehicle to an authorised PROTON dealer for inspection.



DOIAW010R3014

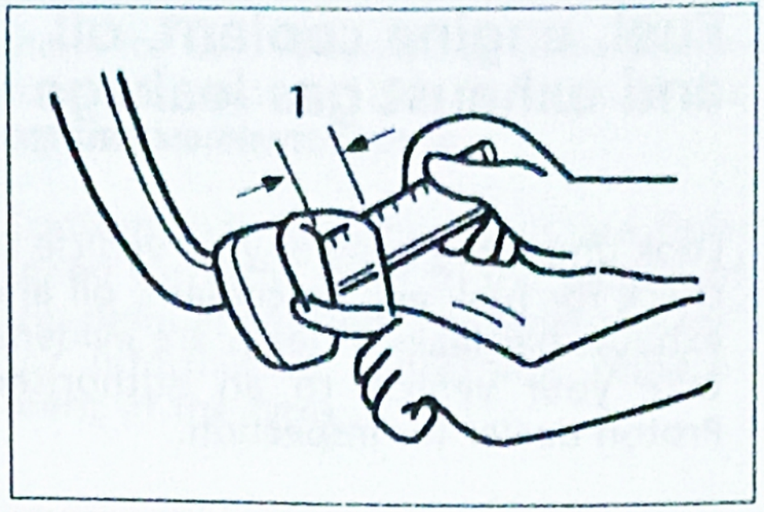
Steering wheel free play

OWN010MAINT016MC

Check by moving the steering wheel left and right. On vehicles equipped with power steering, check the steering wheel free play while the engine is idling. The free play at the circumference should not exceed the standard value.

1 - Free play 30 mm (1.1 in)

If the steering wheel free play exceeds the standard value, have the steering wheel adjusted at an authorised PROTON dealer.



DOIAW010R3015

Clutch pedal free play *

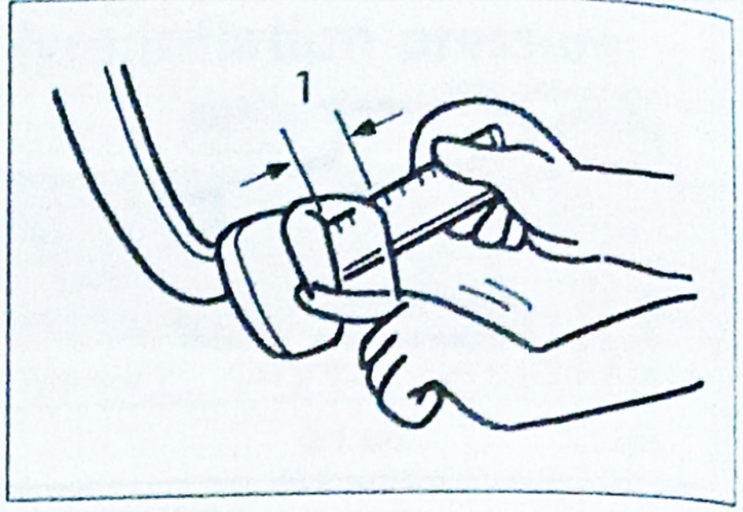
OWN010MAINT017MC

Press down the clutch pedal with your fingers until initial resistance is felt.

This distance should be within the specified range.

1 - Free play 6-13 mm (0.2-0.5 in)

If the clutch pedal free play is not within the standard range, have the clutch pedal adjusted at an authorised PROTON dealer.



DOIAW010R3015

Brake pedal free play

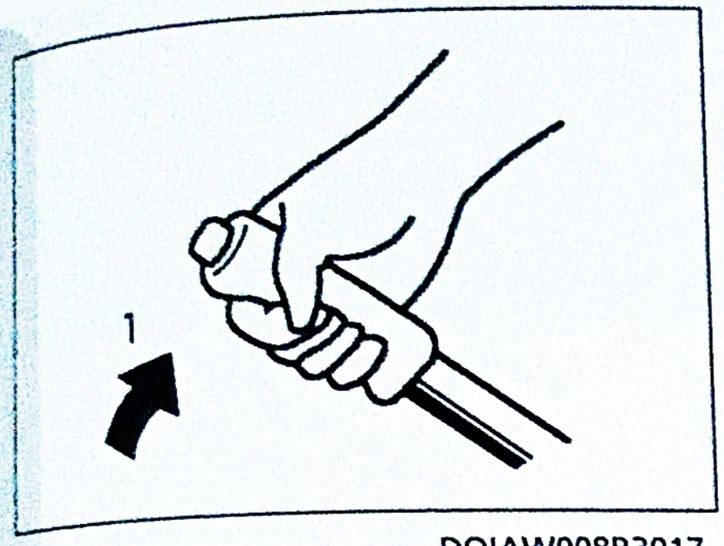
OWN010MAINT018MC

Stop the engine, depress the brake pedal several times, and press down the pedal with your fingers until initial resistance is felt. This distance should be within the specified range.

1 - Free play 3-8 mm (0.1-0.3 in)

If the brake pedal free play is not within the standard range, have the brake pedal adjusted at an authorised PROTON dealer.

* if fitted



DOIAW008R3017

Parking brake lever stroke
OWN010MAINT019MC

Pull the parking brake lever all the way up to check the number of "clicks" that the ratchet makes. One click represents a lever movement of one notch. The lever should move the specified number of notches for normal brake application.

1 - Parking brake lever stroke 3–5 notches

If the parking brake lever stroke is not within the standard range, have the brake lever adjusted at an authorised PROTON dealer.

Hinges and latches lubrication
OWN010MAINT020MC

Check all latches and hinges, and lubricate if necessary by first cleaning and then applying multipurpose grease.

Wiper blades
OWN010MAINT021MC

Before operating the wipers, check the wiper blades and its wiping area from any obstruction of deposits on the windscreen or rear window. Do not use the wipers when the glass is dry. They may scratch the glass surface or the blades may be prematurely worn out.

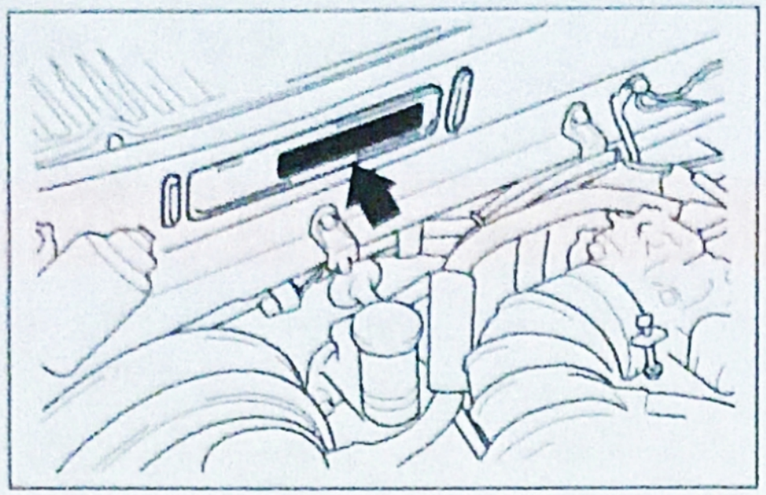
Ventilation slots

OWN010MAINT022MC

The ventilation slots in front of the windscreen should be cleared all the time to ensure the operation of the ventilation systems will not be impaired.

SPECIFICATIONS

Chassis number	122
Engine number	122
Vehicle information code plate	122
Dimensions	125
Performance	126
Weight Saloon	127
Weight Aeroback	128
Engine	129
Transmission	130
Electrical system	131
Tyres and wheels	132
Other specification	133
Fuel consumption	134
Lubrication	135

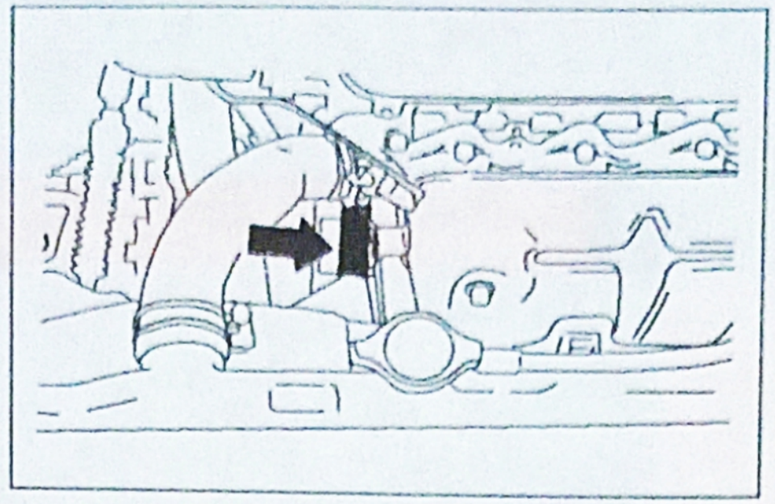


DOIAW009R3001

Chassis number

OWN011SPECS001MC

The chassis number is stamped on the bulkhead as shown in the illustration.

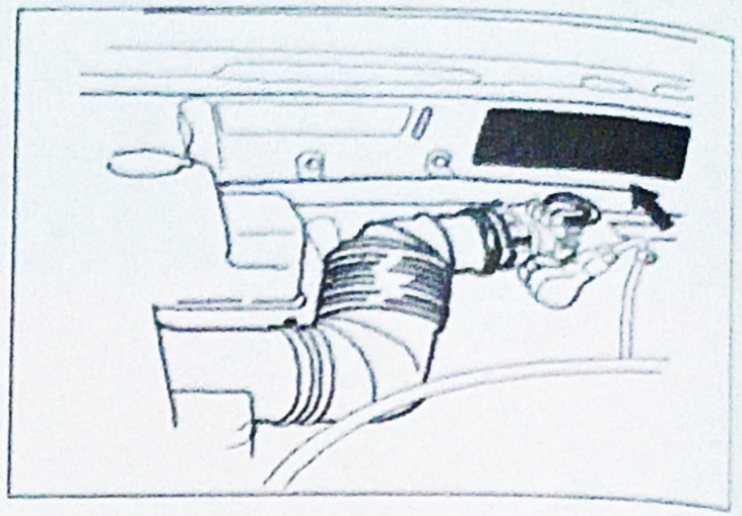


DOIAW009R3003

Engine number

OWN011SPECS002MC

The engine number is stamped on the engine cylinder block as shown in the illustration.

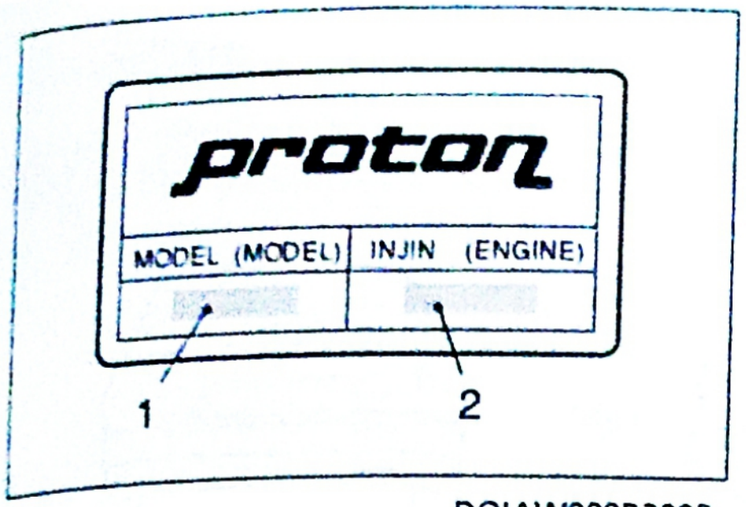


DOIBW009R6001

Vehicle information code plate

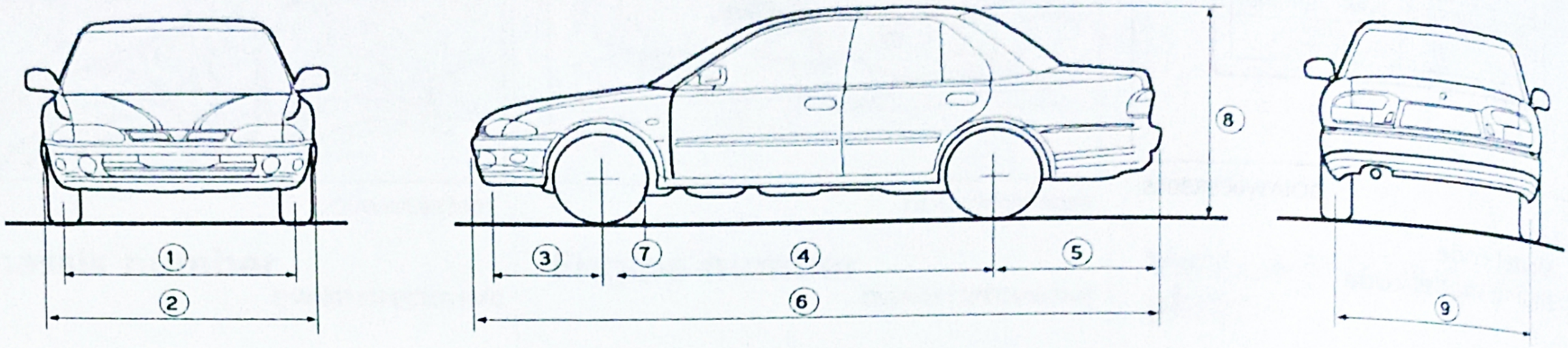
OWN011SPECS003MC

The vehicle information code plate is riveted as illustratied. The plate shows model code, engine model, transmission model and body color code, etc. Please use this number when ordering replacement parts.



DOIAW009R3005

1 - Model code
2 - Engine model code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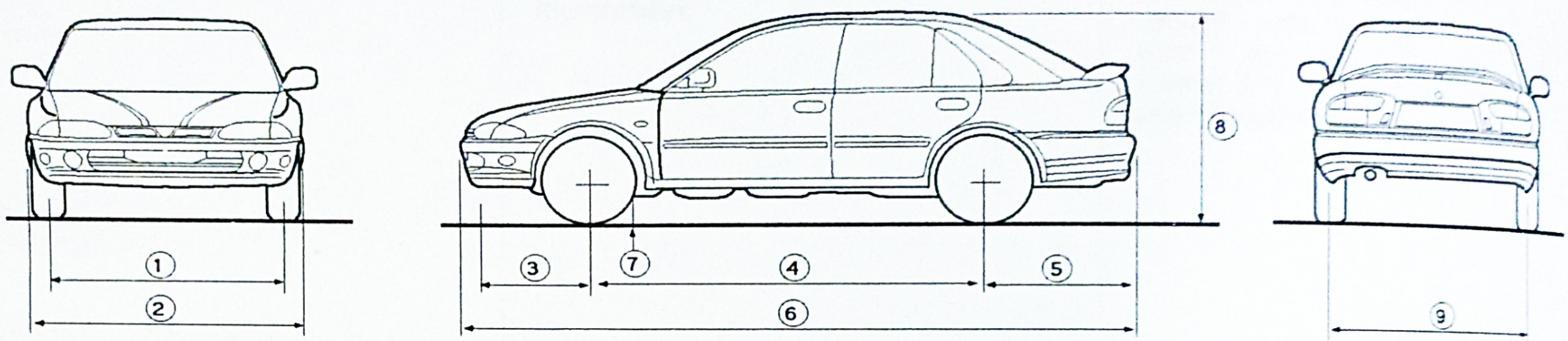
1
2
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9

Dimensions

OWN011SPECS004MC

	Item	Saloon	Aeroback
1	Front track	1450 mm (57 in)	
2	Overall width	1680 mm (66.1 in)(1)	1690 mm (66.5 in)
3	Front overhang	820 mm (32.2 in)	
4	Wheel base	2500 mm (98.4 in)	
5	Rear overhang	1040 mm (40.9 in)	950 mm (37.4 in)
6	Overall length	4360 mm (171.6 in)	4270 mm (168.1 in)
7	Ground clearance (unladen)	150 mm (5.9 in)	
8	Overall height(unladen)	1385 mm (54.5 in)	
9	Rear track	1460 mm (57.4 in)	

(1) Without side protector moulding

Performance

OWN011SPEC5028MC

Item		Maximum speed	Minimum turning radius
			Wheel
1300		164 km/h (101.9 mph)	4.8 km/h (2.9 mph)
1500	M/T	173 km/h (107.4 mph)	5.1 km/h (3.1 mph)
	A/T	165 km/h (102.5 mph)	
1600	M/T	187 km/h (116.1 mph)	
	A/T	175 km/h (108.7 mph)	
1800 (DOHC)	M/T	205 km/h (127.3 mph)	
	A/T	188 km/h (116.8 mph)	
2000	M/T	145 km/h (90 mph)	4.8 km/h (2.9 mph)

Weight Saloon

OWN011SPEC5055

Item			Kerb weight (kg)				Maximum gross vehicle weight (kg)				Maximum axle weight (kg)		Seating capacity
			Without optional parts		With full optional parts		Without optional parts		With full optional parts				
			Without ABS	With ABS	Without ABS	With ABS	Without ABS	With ABS	Without ABS	With ABS	Front	Rear	
Saloon	1300		970[1](2139) 975[2](2150)	—	1000[2] 1005 (2216)	—	1345[2] (2966) 1350 (2977)	—	1375[2](3032) 1380 (3043)	—	830 (1830)	790 (1742)	5 persons (including a driver)
	1500	M/T	990[2](2183) 995(2194)	—	1020[2] (2249) 1025 (2260)	—	1365[2](3010) 1370 (3021)	—	1395[2] (3076) 1400 (3087)	—			
		A/T	1015 (2238)	—	1045 (2304)	—	1390 (3065)	—	1420 (3131)	—			
	1600	M/T G-Li	1050 (2315)	—	1080 (2381)	—	1425 (3142)	—	1455 (3208)	—			
		M/T X-Li	1065 (2348)	1080 (2381)	1095 (2414)	1110 (2448)	1440 (3175)	1455 (3208)	1470 (3241)	1485 (3274)			
		A/T	1095 (2414)	1110 (2448)	1125 (2481)	1140 (2514)	1470 (3241)	1485 (3274)	1500 (3308)	1515 (3341)			
	1800	M/T	—	1090 (2403)	—	1120 (2470)	—	1465 (3219)		1495 (3296)			
		A/T	—	1125 (2481)	—	1155 (2547)	—	1500 (3308)		1530 (3374)			
	2000	GLS	1095 (2414) 1105[3] (2470)	—	1125 (2481) 1135[3] (2503)	—	1470 (3241) 1480[3](3263)	—	1500 (3308) 1510[3](3330)	—			
		GLX	1110 (2470) 1120[3] (2470)	—	1140 (2514) 1150[3] (2536)	—	1485 (3274) 1495[3] (3296)	—	1515 (3341) 1525[3] (3363)	—			

(1) Vehicle without power steering
(2) Vehicle with power steering
(3) Vehicle with turbocharger

Weight Aeroback

OWN011SPECS070

Item			Kerb weight (kg)		Maximum gross vehicle weight (kg)		Maximum axle weight (kg)		Max. axle weight when towing (kg)	Maximum trailer weight (kg)		Max. trailer nose weight (kg)	Max. roof rack load (kg)	Seating capacity
			Without Optional parts	With full optional parts	Without optional parts	With full optional parts	Front	Rear	Rear	With brake	Without brake			
Aeroback	1300		1000 1005(1)	1030 1035(1)	1365 1370(1)	1395 1400(1)	830	790	850	1000	500	50	45	5 persons (including a drive)
	1500	M/T	1010	1040	1385	1415			860					
		A/T	1030	1060	1405	1435								
	1600	M/T	1075	1105	1450	1480			895					
		A/T	1110	1140	1485	1515								
	1800	M/T	1005	1135	1480	1510								
		A/T	1130	1160	1505	1535								
	2000		1020 1130(2)	1150 1160(2)	1485 1505(2)	1515 1535(2)			860					

(1) Vehicle with power steering.
(2) Vehicle with turbocharger.

Engine

OWN011SPECS073

Item		1300	1500	1600	1800	2000
Engine type		Four cylinder, in line, water cooled, single overhead camshaft				Four cylinder, in line, water cooled, four cycle, single overhead camshaft
Engine model		4G13P	4G15P	4G92P	4G93P	4D68P
Total displacement		1,298 cc	1,468 cc	1,597 cc	1,834 cc	1,998 cc
Bore		71.0 mm (2.7 in)	75.5 mm (2.9 in)	81.0 mm (3.1 in)	81.0 mm (3.1 in)	82.7 mm
Stroke		82.0 mm (3.2 in)	82.0 mm (3.2 in)	77.5 mm (3 in)	89.0 mm (3.5 in)	93.0 mm
Compression ratio		9.5:1	9.2:1	10.0:1	10.0:1	22.2:1
Valve clearance	Intake	0.20 mm (0 in)	0.20 mm (0 in)	0.20 mm (0 in)	0.20 mm (0 in)	0.25 mm (0 in)
	Exhaust	0.25 mm (0 in)	0.25 mm (0 in)	0.30 mm (0 in)	0.30 mm (0 in)	0.25 mm (0 in)
Firing order		1–3–4–2				
Maximum output(DIN)		56 kW/6000rpm	64 kW/6000rpm	70 kW/5500rpm	85 kW/5500rpm	47.5 kW4500rpm 60 kW4500rpm(1)
Maximum torque(DIN)		10.7 kgm/3000rpm	12.4 kgm/3000rpm	13.5 kgm/4000rpm	16.0 kgm/4500rpm	12.3 kgm/3000rpm 17.2kgm/2500rpm

(1) Vehicle with turbocharger

Transmission

OWN011SPECS046

Item		1300	1500		1600		1800		2000
			M/T	A/T	M/T	A/T	M/T	A/T	
Gear ratio	1st	3.363	3.363	2.846	3.083	2.846	3.363	2.846	3.368
	2nd	1.947	1.947	1.581	1.947	1.581	1.947	1.581	1.947
	3rd	1.285	1.285	1.000	1.285	1.000	1.285	1.000	1.285
	4th	0.939	0.939	—	0.939	0.685	0.939	0.685	0.939
	5th	0.777	0.777	—	0.756	—	0.777	—	0.756
	Reverse	3.083	3.083	2.176	3.083	2.176	3.083	2.176	3.083

Electrical system

OWN0115PECS047

Item		1300	1500	1600	1800	2000
Voltage		12 V				
Battery	Type	55D23R			65D23R	95D31R
	Capacity	48 AH / 5 HR			52 AH/ 5 HR	64 AH/5HR
Alternator capacity		70 A—75 A				75A
Spark plug type	NGK NIPPONDENSO CHAMPION	BPR5ES-11 W16EPR-11 RN11YC4		BP5ES-11 — BR5E-11 W16EP-11 — K16P11 RN11YC4 —N12YC4		Self regulating Glow system

Tyres and wheels

OWN011SPEC5054

Item		1300	1500	1600, 1800	2000
Tyre Size		185/60 R14 82H		185/60 R14 82H	185/60 R14 82H
Wheel	Size	13 x 5.00B		14 x 5.5 JJ	14 x 6.0 JJ
	Offset	46 mm (1.8 in)			

Other specification

OWN011SPECS026MC

Item		1300	1500	1600	1800	2000
Fuel system	Fuel control	Electronic control injection				Fuel injection nozzle: Throttle type
	Fuel pump	Electric motor type				Fuel injection pump: Bosch VE
Clutch		Dry single disc clutch with diaphram spring		Dry single disc clutch with diaphram spring, hydraulic type		
Steering system		Rack and pinion type	Rack and pinion type, power assisted			
Suspension	Front	Independent type, Macpherson strut, coil spring				
	Rear	Independent type, multi-link, coil spring				
Service brake	Type	Hydraulic, diagonally connected double circuit system with power assisted		Hydraulic, diagonally connected double circuit with power assistance, anti-lock braking system[1]		Hydraulic diagonally connected double circuit system with power assisted
	Front	Disk brakes	Ventilated disc brakes			
	Rear	Drum brakes		Solid disc brakes		Drum brakes
Parking brakes		Parking brake act mechanically rear wheels				

(1) If fitted

Fuel consumption

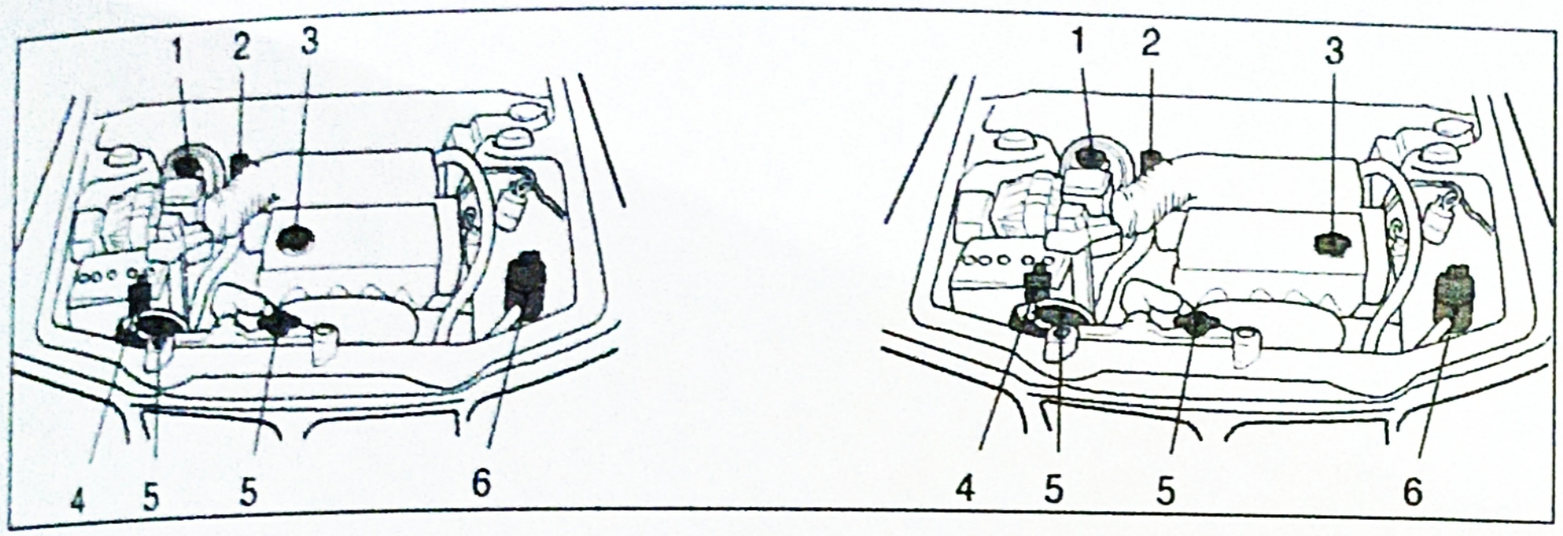
OWN011SPECS017

Models	1300	1500		1600		1800 (DOHC)
	M/T	M/T	A/T	M/T	A/T	M/T
Simulated urban driving [litres/100 km(miles/gallon)]	11.7 (24)	12.4 (23)	11.7 (24)	15.3 (18)	14.4 (19)	14.0 (20)
Extra urban [litres/100km(miles/gallon)]	6.4 (43)	6.7 (42)	6.6 (43)	6.7 (42)	7.0 (40)	6.9 (41)
Combined [litres/100 km(miles/gallon)]	8.4 (34)	8.8 (32)	8.5 (33)	9.9 (28)	9.7 (29)	9.5 (29.8)

NOTE

The results given do not express or imply any guarantee of the fuel consumption of the particular vehicle.

The vehicle itself has not been tested and there are inevitably differences between individual vehicle of the same model. In addition, this vehicle may incorporate particular modifications. Futhermore, the driver's style and road and traffic conditions, as well as the extent to which the vehicle has been driven and the standard of maintenance, will all effect its fuel consumption.



DOIAW009R1133

Lubrication

OWN011SPECS027MC

No	Item			Quantity	Recommended lubricants
1	Brake Fluid			As required	Brake fluid DOT3 or DOT4
2	Clutch fluid			As required	Brake fluid DOT3 or DOT4
3	Engine oil	Oil pan	1300, 1500	3.0 lit (3.1 U.S.qts; 2.6 Imp.qts)	Refer to page
			1600, 1800	3.5 lit (3.6 U.S.qts; 3 Imp.qts)	
		Oil filter	1300, 1500, 1600, 1800	0.3 lit (0.3 U.S.qts; 0.2 Imp.qts)	
4	Automatic transmission fluid(1)			6.0 lit (6.3 U.S.qts; 5.2 Imp.qts)	Diamond ATF-SP or Proton ATF-SP
5	Engine coolant		1300, 1500	5.0 lit (5.2 U.S.qts; 4.3 Imp.qts)	High-quality ethylene gylcol(includes 0.65 litre in the reserve tank)
			1600, 1800	6.0 lit (6.3 U.S.qts; 5.2 Imp.qts)	
6	Power steering fluid(1)			0.9 lit (0.9 U.S.qts; 0.7 Imp.qts)	ATF DEXRON or DEXRON II
7	Manual transmission fluid(1)		1300, 1500, 1600, 1800	1.8 lit (1.8 U.S.qts; 1.5 Imp.qts)	Hypoid gear API GL-4 SAE 75W-85W or 75W-90W

(1) If fitted

Index

Accessory boxes 79
Air conditioning 72-73
Anti-lock brake system (A.B.S) 67
Ashtray 78
Automatic transmission
- 4A/T 61
- Fluid 111
- Possible driving speed 63
Automatis transmission, Selector positions 61

Battery 113
- Discharged battery (Emergency starting) 98
Bleeding the fuel system 95
Brake system
- Anti-lock brake 67
- Braking 66
- Fluid 114
- Parking brake 64
- Pedal free play 118
Bulb capacity, replacement 101

Catalytic converter 54
Chassis number 122
Cigarette lighter 77
Cleaning the inside of your vehicle 82
- Plastic, Vinyl leather, etc 82
Cleaning the outside of your vehicle 83
- Chrome parts 85
- Damaged paint 84
- Polishing 84
- Washing 83
- Waxing 84
Clutch
- Fluid 115
- Pedal free play 118
Cup tray 80

Digital clock 78
Dimensions 125
Door open lamp, Replacement 106
Doors, Central door locks 14

Economical driving 55
Emergency starting 98
Engine
- Coolant 112
- Number 122
- Oil 110

Front fog lamp, Replacement 104
Front turn signal lamp, Replacement 103
Fuel
- Capacity (Fuel usage) 53
- Fuel gauge 40
Fuses 99

Glove box 79

Hazard warning flasher switch 48
Headlights, Replacement 102
High mounted stop lamp, Replacement 107
High mounted stop lamp\lReplacement 105
Hinges and latches lubrication 119

Ignition switch 56

Jacking up the vehicle 89

License plate lamp, Replacement 105
Luggage compartment lamp, Replacement 106

Manual transmission
- Driving speed 60
- Shifting 59
Meter, gauge and indication/warning lamp operation 117
Mirrors
- Electric remote-controlled outside rear-view mirrors 70
- Inside rear-view mirror 70
- Outside rear-view mirrors 70
- Vanity mirror 76

Odometer 39

Parking 63-64
Parking brake 65
Parking brake lever stroke 119
Position lamp, Replacement 103
Punctured 91

Rear combination lamp, Replacement 105
Rear window demister switch 48
Replacement of lamp bulbs 101
Room lamp, Replacement 106
Running-in recommendations 52

Side turn signal lamp, Replacement 104
Spare wheel 90
Speedometer 33
Starting 57
Steering
- Power steering fluid 115
- Steering wheel free play 118
- Steering wheel height adjustment 69
Sun visors 76

Tachometer 39
Tools 88
Tools and jack 88
Towing 93
Transmission
- Automatic transmission 61
- Manual transmission 59
Tyre
- Spare wheel 90
- Tyre inflation pressure 116
Tyre rotation 117

Vehicle information code plate 122
Ventilators 72

Washer fluid 115
Water temperature gauge 40
Wheel
- Condition 116
- Covers 90

Wiper blades 86, 119

Notes

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